



***STALKER 48" STAND-ON MOWER***  
***Owner's Manual***



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**Tractors and Decks**  
**Mean Green Products LLC**  
**Two Year Limited Warranty For Residential and Commercial Use**



**WHAT IS COVERED BY THIS WARRANTY**

Mean Green Products, makes the following warranty to the original purchaser only:

**A. Residential Use:** Mean Green Mowers used for normal **residential purposes\*** are warranted for **two (2) years or 500 hours total usage (whichever comes first) from date of delivery** on all materials and workmanship.

If the Purchaser discovers within this warranty period (two years from date of delivery) a defect in materials or workmanship: He must promptly notify Mean Green Products or an authorized dealer, in writing of the defect.

In no event shall such notification be received by Mean Green Products, or an authorized dealer later than twenty-four (24) months from date of delivery. Within a reasonable time after such notification,

Mean Green Products, will correct any defect in material or workmanship on the Mean Green Mower by repairing or replacing part(s) with either new or used replacement parts.

Such repair, including parts and labor shall be at the expense of Mean Green Products, and,

**the batteries** are covered by a three (3) year pro-rated limited warranty or 500 hr. usage, whichever comes first to the original owner (**consumer**) only.

1st year — 100%

2nd year — 66%

3rd year — 33%

**NOTE:** Failure to properly maintain batteries and keep them fully charged will reduce battery life and will void battery warranty.

**The provisions of this limited warranty shall not apply to failure due to:**

Abuse or neglect such as improper fluid levels, water damage, loose wiring, or rusted or corroded hardware; lack of proper maintenance; damage caused by improper installation of the battery;

neglect, breakage, freezing, fire, explosion, wreckage, the addition of any chemical, operation

of the battery in an overcharged, or the operation of the battery in an uncharged condition (below half-charge

-1.200 specific gravity); and a battery charged by systems other than the original equipment type battery charger.

**\* Normal residential purpose means use of product**

**on same lot as your home.** Use at more than one

location is considered commercial use, and then the commercial use warranty would apply.

**B. Commercial Use:** Mean Green Mowers used for commercial and institutional use are warranted for **two (2) years or 500 hours total usage (whichever comes first) from date of delivery** on all materials and workmanship of chassis and deck structures and **one (1) year or 500 hours total usage (whichever comes first) from date of delivery** on all materials and workmanship. If the Purchaser discovers within this warranty period a defect in materials or workmanship:

He must promptly notify Mean Green Products, or an authorized dealer, in writing of the defect. In no

event shall such notification be received by Mean Green Products, or an authorized dealer later than twelve to twenty-four (12-24) months from date of delivery. Within a reasonable time after such notification, Mean Green Products, will correct any defect in material or workmanship on the Mean Green Mower, by repairing or replacing part(s) with either new or used replacement parts. Such repair, including parts and labor shall be at the expense of Mean Green Products, and, **the batteries** are covered by a two (2) year pro-rated limited warranty or 500 hr. usage, whichever comes first to the original owner (**commercial**) only.

1st year — 100%

2nd year — 50%

**NOTE: Failure to properly maintain batteries and keep them fully charged will reduce battery life and will void battery warranty.**

**The provisions of this limited warranty shall not apply to failure due to:**

Abuse or neglect such as water damage, loose wiring, or rusted or corroded hardware; lack of proper maintenance; damage caused by improper installation of the battery; neglect, breakage, freezing, fire, explosion, wreckage, the addition of any chemical, operation of the battery in an overcharged, or the operation of the battery in an uncharged condition (below half-charge -1.200 specific gravity); and a battery charged by systems other than the original equipment type battery charger.

**C. Rental Use:** Mean Green Mowers used in rental applications are **not** covered by warranty. This also includes no warranty on the batteries.

#### **WHO MUST PERFORM THE WARRANTY SERVICE**

All warranty service will be performed by dealers authorized by Mean Green Products. **Service calls and/or transportation expense** of the product to and from the authorized dealer, for warranty work, will be paid by the owner of the product. For warranty service contact an authorized dealer.

#### **WHAT IS NOT COVERED BY THIS WARRANTY**

Mean Green Products, does not warranty:

Some product, components or parts not manufactured by Mean Green Products.

Repairs made by unauthorized persons. Damage caused by use of the Mean Green Mower for purposes other than those for which it was designed. Damages caused by disasters such as fire, flood, wind, and lightning. Damages caused by neglect, abuse, abnormal use, improper or unreasonable use, accident, negligence, or misuse such as water damage. Repairs or replacement resulting from the use of unauthorized parts, accessories or attachments. Repairs or replacement as the result if any alterations or modifications, in the determination of the Mean Green Mower, which adversely affects the operation, performance or durability of the equipment. The Mean Green Mower which has the serial number removed or made illegible. Depreciation or damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow the product's owner's manual operating, maintenance and adjustment instructions or other operational instructions provided by Mean Green Products.

Normal maintenance parts and service including, but not limited to, lubricants, tune-up parts, blades, blade sharpening, bearings, brake or steering adjustments.

#### **DISCLAIMER OF WARRANTY**

The foregoing warranties are in lieu of all other warranties, expressed or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. However, if the Mean Green Mower is purchased as a consumer product, any implied warranty of merchantability or fitness for a particular purpose is limited to the duration of this limited warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

#### **LIMITATION OF REMEDIES**

In no case shall Mean Green Products, be liable for any special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability in tort, or any other legal theory.

Such damages include, but are not limited to:

- Loss of profits
- Loss of savings or revenue
- Loss of use of the Mean Green Mower or any associated equipment
- Cost of capital
- Cost of any substitute equipment, facilities, services or downtime
- The claims of third parties including customers, and injury to property

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

#### **TIME LIMIT**

Any action for breach of warranty must be commenced within twenty-four (24) months following delivery of the goods in a **residential** application. Any action for breach of warranty must be commenced within twelve to twenty-four (12-24) months following delivery of the goods in a **commercial** application.

**NO OTHER WARRANTIES**

This agreement is understood to be the complete and exclusive agreement between the parties, superseding all prior agreements, oral or written, and all other communications between the parties relating to the subject matter of this agreement.

**ALLOCATION OF RISKS**

This agreement allocates the risks of product failure between Mean Green Products and the purchaser. This allocation is recognized by both parties and is reflected in the price of the goods.

**OWNER'S RESPONSIBILITY**

You must maintain your Mean Green Mower following the maintenance procedures described in your owner's manual. Such routine maintenance, whether performed by a dealer or by you, is at your expense.

**This machine like any other powered equipment is potentially dangerous unless properly operated.** Any operator **must** be cautious and keep safety in mind at all times. Any operator, prior to using the Mean Green Mower, should thoroughly familiarize himself with the owner's manual regarding operation and safety of the machine, as well as all safety warnings on the machine itself.

**WARRANTY REGISTRATION**

- 1. Owners must** register the unit by filling out the Warranty Registration Form, provided in the owner's packet. It **MUST** be completed and signed by the authorized dealer and original purchaser.
- 2.** For validation, the completed Warranty Registration Form **MUST** be forwarded to Mean Green Products, within ten (10) days following date of purchase.
- 3.** The date of purchase constitutes delivery.



## GENERAL INFORMATION

**This manual applies to the following Mean Green Products equipment lines:  
Mean Green Mowers – 48”/52” Stand-On Mower (STALKER)**

### *To the new owner*

The purpose of this manual is to assist owners and operators in maintaining and operating the mower. Please read it carefully; information and instructions furnished can help you achieve years of dependable performance. It is the **owner's responsibility** to make certain that the operators and mechanics read and understand this manual and all decals before operating this machine. It is also the **owner's responsibility** to make certain that the operators and mechanics are qualified and physically able individuals, properly trained in the operation of this equipment. All operators and mechanics must become familiar with the safe operation of the equipment, operator controls and safety signs. Never let children or untrained people operate or service the equipment. Local regulations may restrict the age of the operator. The owner/user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.

### **Using this manual**

General operation, adjustment and maintenance guidance is outlined for both the experienced and novice Mean Green Mower user. Operating conditions vary considerably and cannot all be addressed individually. Through experience, however, operators should find no difficulty in developing good operating skills suitable to most conditions. Directions used in this manual, for example RIGHT or LEFT, refer to directions when seated on the mower/standing facing forward, unless otherwise stated. Photographs and illustrations used were current at the time of printing, but subsequent production changes may cause your machine to vary slightly in detail. Mean Green Products reserves the right to redesign and change the machine as deemed necessary, without notification. If a change has been made to your machine which is not reflected in this owner's manual, or the parts manual, see your Mean Green Products dealer for current information and parts.

### **Warranty registration**

The Owner must register the unit by filling out the Warranty Registration Form, provided in the owner's packet, to validate your warranty protection. As the new equipment owner, you are expected to see that this is done at the time of delivery. If using the Warranty Registration Form, it **MUST** be completed and signed by the authorized dealer and original purchaser.

Be sure to register the mower plus each attachment that displays a model and serial identification number plate with Mean Green Products.

**IMPORTANT:** Any unauthorized modification, alteration, or use of non-approved attachments voids the warranty and releases Mean Green Products from any liability arising from subsequent use of this equipment.

### **Model and serial number**

The mower serial number is found on the serial identification plate located on the right inside tower below the top control panel. The model is the type of Mean Green Mower purchased i.e. residential, estate, commercial, push, walk behind, zero turn or stand on model. The serial numbers and model are required on the Warranty Registration form. They will also assure you of the correct service parts when replacement becomes necessary.

### **Parts and service**

All warranty repair and service must be handled through an authorized Mean Green Products dealer. Arrangements should be made through your local service center.



# SAFETY PRECAUTIONS



This safety alert symbol is used to call attention to a message intended to provide a reasonable degree of **PERSONAL SAFETY** for operators and other persons during the normal operation and servicing of this equipment.

**DANGER** – denotes immediate hazards which WILL result in severe personal injury or death.

**WARNING** – denotes a hazard or unsafe practice which COULD result in severe personal injury or death.

This manual uses two other words to highlight information.

**IMPORTANT** calls attention to special mechanical information and **NOTE**: emphasizes general information worthy of special attention.

All operators and mechanics should read this manual and be instructed about safe operating and maintenance procedures. If the operators or mechanics cannot read and understand English, it is the owner's responsibility to explain this material to them.

**However, improper use or maintenance by the operator or owner can result in injury. To reduce the potential for injury, comply with these safety instructions and always pay attention to the safety alert symbol, which means DANGER or WARNING - "personal safety instructions." Failure to comply with the instructions may result in personal injury or death.**

**Incorrect usage of this machine may result in severe injury. Personnel operating and maintaining it should be trained in the proper use and should read the manuals completely and thoroughly before attempting to set-up, operate, adjust, or service this machine.**

It is the **owner's responsibility** to make certain that the operators and mechanics read and understand this manual and all decals before operating this machine. It is also the **owner's responsibility** to make certain that the operators and mechanics are qualified and physically able individuals, properly trained in the operation of this equipment. All operators and mechanics must become familiar with the safe operation of the equipment, operator controls and safety signs.

Never let children or untrained people operate or service the equipment. Local regulations may restrict the age of the operator.

The owner/user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.

The owner should also ensure that the operator/mechanic know that they are responsible for their own safety as well as the safety of other persons within the vicinity. **Remember**, the operator is responsible for accidents or hazards occurring to other people or their property.

## Safety and Instruction Decals

Specific safety warning decals are located on the equipment near the immediate areas of potential hazards. These decals should not be removed or obliterated. Replace them if they become non-readable.

The following illustrations show the various decals that are located on the machine. A brief explanation, for those requiring one, is shown to help the operator understand the meanings of these decals.

**• Read Owner's Manual and Safety Warning Decals before attempting to operate this machine.**

**⚠ DANGER: Rotating blades! (fig.1A)**

- \* Keep shields and covers in place while machine is in operation
- \* Keep hands, feet and clothing away from rotating blades



**⚠ Warning: Do Not Step! (fig.1B)**

- \*Fall Hazard



**⚠ DANGER: Do Not Sit OR Ride! (fig.1D)**

- \*Do Not Carry Passengers
- \*Ejection Warning!

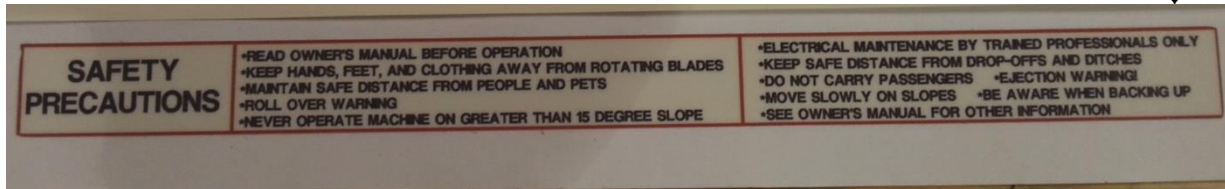




**DANGER: Safety Precautions!:** (fig.2A) (middle control panel)

1. Read Owner's Manual Before Operation
2. Keep Hands, Feet, And Clothing Away From Rotating Blades
3. Maintain Safe Distance From People And Pets
4. Roll Over Warning – Never Operate Machine On Greater Than 15 Degree Slope
5. Electrical Maintenance By Trained Professionals ONLY
6. Keep Safe Distance From Drop-Offs and Ditches
7. Do NOT Carry Passengers
8. Ejection Warning – Move Slowly On Slopes
9. Be Aware When Backing Up
10. See Owner's Manual For Other Information

2A↓



**Important: Red Battery Quick Disconnect Handle – (found in battery compartment)**  
**PULL Red Handle inward toward center of mower to disconnect all power to unit. (also see pages 25-30) Disconnect with all maintenance, repairs, cleaning and transportation of mower!!**

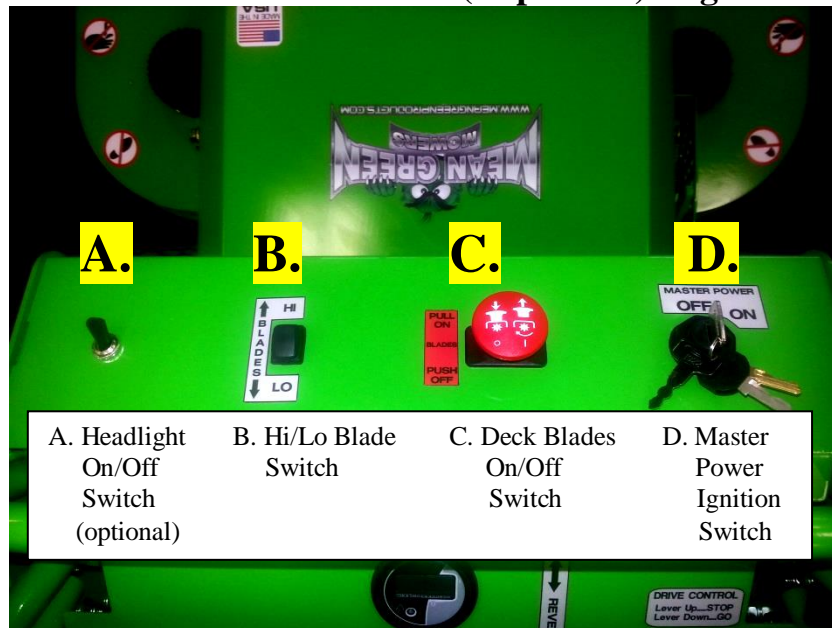


**Important: Deck Height Adjustment Handle (fig.1C)**

\*Changes Deck Height from 1" to 4.5" (located on right operator side of mower)



**Mower Control Panel (Top Panel) Fig.3**



**⚠ Important: Control Buttons – Top Panel**

**Fig.3A: Optional Headlight Switch:** Turns headlights On and Off when additional light is needed. (Located left side of top mower control panel)

**IMPORTANT!  
READ!**

**Fig.3B: Hi/Lo Blade Switch:** (Located on top mower control panel) High Blade Mode is higher blade speed for cutting thicker grass. Low Blade Mode provides lower blade speed used for lower battery consumption on thinner dry grass areas.

**NOTE:** Mowing time may be increased up to 15% when mowing in low blade mode when practical.

**Fig.3C: Deck Blades ON and OFF Switch:** This switch engages the deck blade motors. Pull the switch up to engage blades and push switch down to disengage blade motors. **NOTE:** There is a few second delay before blades will start!

**IMPORTANT:** ALWAYS PUSH DOWN and DISENGAGE blades if children, pets, bystanders get in close range of mower AND any EMERGENCY occurs!!

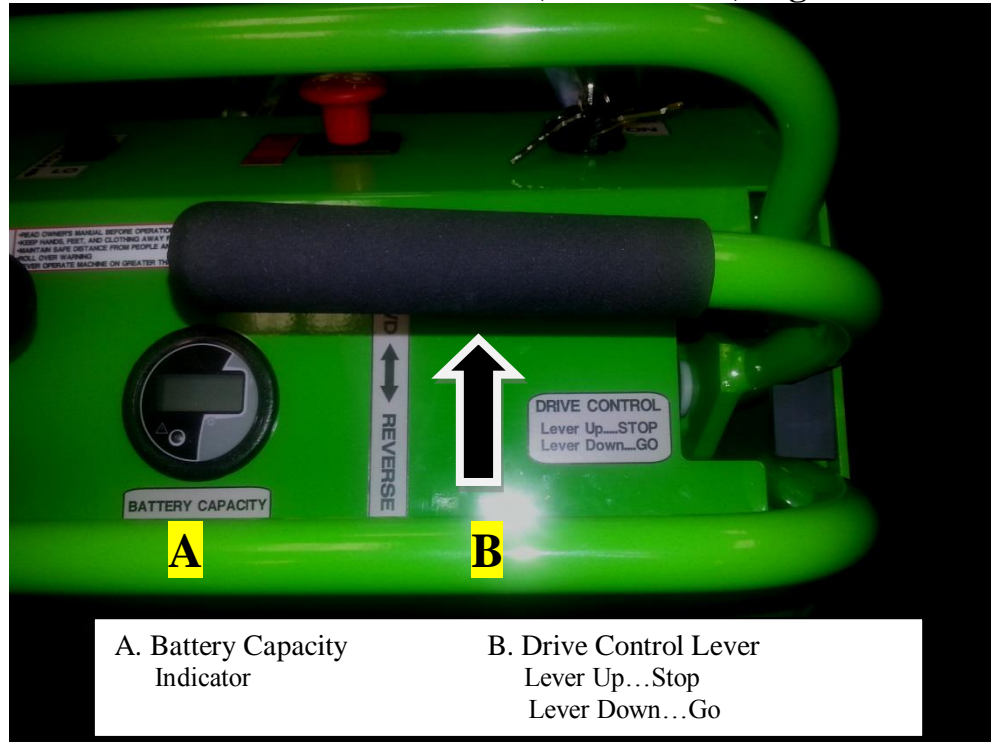
**IMPORTANT:** Never engage deck motors when the deck is under load. Motors or deck could be damaged.

**Fig.3D: Master Power Ignition Switch:** A two position switch Off and On. With key inserted, rotate key clockwise to the On position to start mower.

**IMPORTANT!  
READ!**

**Note:** When switch is in the On position cooling fans will start automatically. If fans do not start, turn key to Off position and notify your service dealer. DO NOT use mower with fans off.

**Mower Control Panel (Front Panel) Fig.4**



A. Battery Capacity Indicator

B. Drive Control Lever  
Lever Up...Stop  
Lever Down...Go

**Fig.4A: Battery Capacity Indicator: Indicates battery state of charge and diagnostic information.**

Turn the key to the ON position, wait 3seconds for diagnostics to load. Display will indicate battery status and drive conditions with READY sign or FAULT indications. **NOTE:** If FAULT occurs, first reset computer by turning key to OFF position and then to the ON position. If FAULT continues: Call your Mean Green Mowers Dealer Immediately!

\*\*\*SEE Appendix Smartec pages 8-12 for detailed Battery Capacity indications,Troubleshooting and Information Guide\*\*\*\*

**IMPORTANT:** When battery voltage becomes low, the mower blades will stop, although the drive motors will continue to run enabling driver to continue to drive unit. When the batteries discharge to this point they require recharging. **The unit should immediately be returned to the battery charging area and the unit connected to the battery charger.**



***TO DRIVE MOWER FORWARD***, push right & left Drive Control Levers forward an equal distance.

**4B**



**Fig.1E: Drive Control Lever Hand Positioning**



***To STOP***, move right & left Drive Control Levers to neutral, **middle** position and release right Drive Control Lever. When going forward to slow down, pull back gently on both Drive Control Levers. When going in reverse to slow down, push forward gently on right & left Drive Control Levers.  
**NOTE:** Always remember middle is neutral!

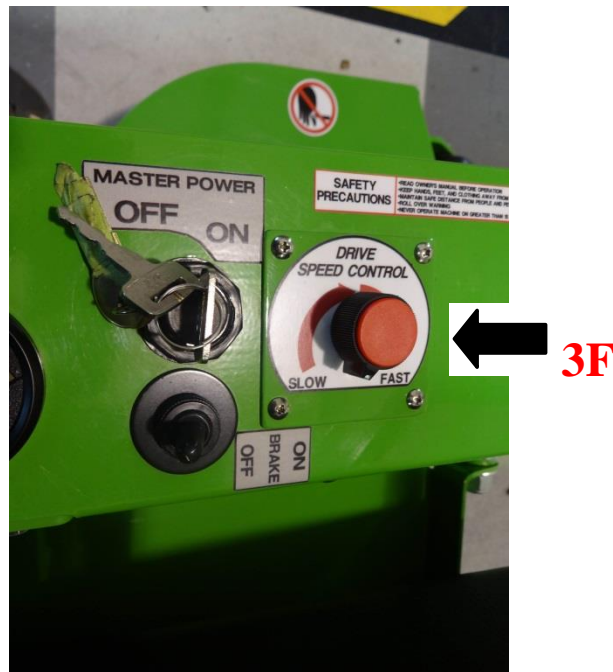


(On certain models)

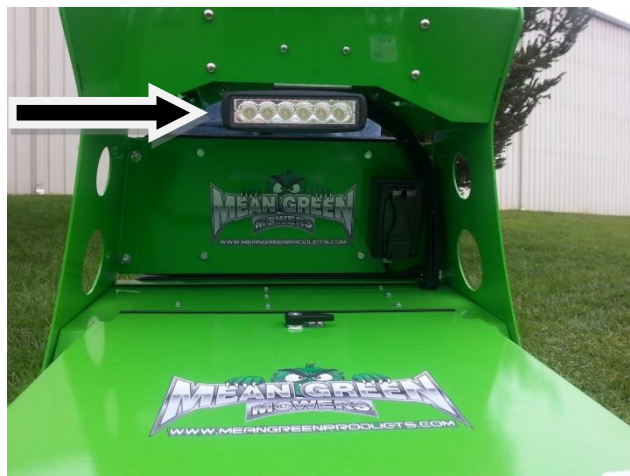
**Fig.3F: Drive Speed Control Knob** – Located on top mower control panel.

Allows operator to select a comfortable driving speed via the Drive Speed Control Knob on the Mower Control Panel. Turn knob clockwise to **INCREASE** drive speed and counterclockwise to **REDUCE** drive speed. Turn knob to Lowest, Slow Speed for inexperienced operators, for trimming around objects, buildings and other obstacles. Always **EASY DOES IT** when unsure or new user to the equipment!  
Get comfortable with mower before increasing knob into faster speeds!

**NOTE:** Speed may be adjusted at any time whether mower is in motion or stopped.



**LED Headlight Kit (Optional)** - Headlight Switch on left side top mower control panel turns headlights On and Off when additional light is needed.



# OPERATION

## Safe Operating Practices

**This product is capable of amputating hands and feet and throwing objects. Always follow all safety instructions to avoid serious injury or death.**

### Operation

Evaluate the terrain to determine what accessories and attachments are needed to properly and safely perform the job. Only use accessories and attachments approved by the manufacturer.

Clean battery compartment, drive motor compartment, mower deck, seat etc. of all dirt and debris. Keep unit free of grass clippings, leaves and other debris. **DO NOT**

spray with water to clean unit. Do not use, solvents, hard cleaners or abrasives. Use only compressed air. Wear adequate eye and hearing protection when cleaning the unit.

Never leave a running machine unattended. **Always stop on level ground, disengage deck blade switch, place drive control bars in neutral position, turn key to off position, remove key and disconnect battery cables by pulling inward on RED battery quick disconnect handle in battery box compartment for any reason including emptying the catcher or unclogging the chute.**

Always remain seated while operating machine.(riding mower models)

Always keep safety shields and covers in place.

Always maintain a safe distance from people and pets when mowing.

Always stop machine if someone enters the area.

Avoid injury. Keep area clear of bystanders when engaging deck blade switch.

Always operate machine in daylight or with adequate working lights.

Follow daily and weekly checklists, making sure electrical connections are secured and bolts are tightened. Always observe traffic laws while driving machine from one location to another. Watch for traffic when operating near or crossing roadways.

Always be alert for hazards such as rocks, metal objects and other debris which may be thrown or entangled by mower blades. Watch out for holes or deep depressions.

Inspect area to be mowed for hazards such as rocks, metal objects and other debris which may be thrown or entangled by mower blades. Remove these objects before mowing.

Always inspect machine for damage after striking a foreign object. If damage is found, repair machine immediately. **Be sure to stop on level ground, disengage deck blade switch, place drive control bars in neutral position, turn key to OFF position,**

**remove key and disconnect battery cables by pulling inward on RED battery quick disconnect handle in battery box compartment!**

Always wear adequate ear protection, such as earplugs, when operating this equipment as prolonged exposure to uncomfortable or loud noises can cause impairment or loss of hearing. Do not wear radios or music headphones while operating the machinery.

Safe operation requires your full attention.

Do not operate the equipment while wearing sandals, tennis shoes, sneakers, shorts or any type of loose fitting clothing. Long hair, loose clothing or jewelry may get tangled in moving parts. Always wear long pants, safety glasses, ear protection and safety shoes when operating this machine.

Always wear safety goggles or safety glasses with side shields when operating the mower.

Always be aware of what is behind the machine before backing up. Do not mow in reverse unless absolutely necessary.

Always look down and behind before and while backing up.

When moving in reverse, **SLOWLY** pull right and left Drive Control Levers rearward and avoid sudden movement. Rapid movement of the Drive Control Levers in either direction could result in a reaction of the machine that can cause serious injury.

Never operate a poorly maintained machine.

Never attempt high speed maneuvering, especially in crowded, congested areas or on slopes.

Never allow persons to operate this machine without proper instruction or allow children to operate machine. Allow only responsible adults who have read and understand these instructions to operate this machine.

Never put hands or feet under any part of the machine while it is running.

Never carry passengers.

Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator. Always disengage the blades and wait for them to stop before crossing gravel drives, walks or roads.

Always keep clear of the mower blades and attachments during their operation.

Turn off blades when not mowing.

Slow down before turning.

Turn the key to the OFF position, remove key and disconnect battery cables by pulling inward on **RED** battery quick disconnect handle in battery box compartment before removing the grass catcher or unclogging the discharge chute. Never clear the discharge chute with the machine running. Turn

the key to the OFF position, remove key, and make sure the blades have stopped before cleaning.

Use a stick to clear a plugged discharge area. **Never use your hand!**

Do not operate the machine while under the influence of alcohol or drugs.

Exercise caution when loading or unloading the machine onto a trailer or truck.

Data indicates that operators, age 60 years and above, are involved in a large percentage of mower-related injuries. These operators should evaluate their ability to operate the mower safely enough to protect themselves and others from serious injury.

If any attachment or additional weight is mounted on the rear or side of the unit (depending on model), any rapid movement in either direction could result in a reaction of the machine that can cause serious injury.

**Clean flammable material from machine. Prevent fires by keeping battery compartment, deck and operator's station clean of accumulated trash, grass clippings, and other debris.**

### Using a ramp

Use extreme caution when loading and unloading a unit onto a truck or trailer with a ramp.

Use only a single, full width ramp; do not use individual ramps for each side of the unit.

Having a full width ramp provides a surface for the mower frame to contact if the unit starts to tip backwards. It also reduces the risk of a wheel going off and the machine tipping over. Do not exceed a 15 degree angle between the ramp and the ground or between the ramp and the trailer or truck. When on a ramp avoid sudden acceleration.

**NOTE: To lock deck height in highest position for travel or loading/unloading – Pull Deck Height Adjustment Handle completely rearward until handle locks in highest position. To lower deck from highest position – pull rearward on Deck Height Adjustment Handle *with one hand* next pull rearward on Deck Height Locking Handle *with other hand*; proceed to lower Deck Height Adjustment Handle to desired height. \*\*See Fig.14 Page 19\*\***

### Slope operation (see page 12A)

**Slopes are a major factor in loss-of-control and tip-over accidents, which can result in severe injury or death. All slopes require extra caution. If you cannot back up the slope or if you feel uneasy on it; do not mow it. REMINDER: Only operate on slopes of 15 degrees or less.**

Use extreme caution when operating on slopes.

- Be extremely careful changing directions on a slope.

Slow down.

- Do not operate where the machine could slip or tip.
- Turn slowly
- Turn on the most level part of the slope
- To maximize traction, it is better to turn the front of the machine uphill, rather than downhill. **If drive tires lose traction, steering control is lost which could cause serious injury or death.**
- If it becomes necessary to turn downhill, turn slowly and gradually.

Do not remove or modify the stabilizer wheels.

Watch for holes, ruts, bumps, rocks or other hidden objects. Uneven terrain could overturn the machine. Tall grass can hide obstacles.

Remove obstacles such as rocks, tree limbs, etc.

Keep all movement on slopes slow and gradual. Do not make sudden changes in speed or direction.

Avoid starting and stopping on a slope. If tires lose traction, disengage the blades and proceed slowly straight down the slope.

Mow a safe distance (minimum of 10 feet, 3.05 meters) away from drop-offs, retaining walls, drainage ditches,

embankments, water, and other types of hazards to avoid a wheel dropping over the edge or to avoid the ground from breaking away. This will reduce the risk of the machine suddenly rolling over causing serious injury or death.

Use a walk behind, push mower or hand-held trimmer on slopes and near drop-offs, retaining walls, drainage ditches, embankments and water to avoid machine rollover and serious injury or death.

Do not mow on wet grass. Reduced traction could cause sliding and loss of steering control.

Do not tow on slopes. The weight of the towed equipment may cause loss of traction and control.

Do not try to stabilize the machine by putting your foot on the ground.

If the mower's tires lose traction when operating on slopes, disengage the deck blade switch, place the drive control levers in the neutral position, and turn the key to the

OFF position and get help.

Never make sudden starts, stops, turns, or reverse direction, especially when maneuvering on slopes. The steering is designed for sensitive response. Rapid movement of the steering control levers in either direction could result in a reaction of the machine that can cause serious injury.

Never stop suddenly while backing down slopes. This action may result in a reaction of the machine that can cause serious physical injury.

The Mean Green Mower is capable of operating horizontally (traverse) on moderate slopes. When operating on slopes up to 15 degrees, be aware of any conditions that may cause the mower drive tires to lose traction resulting in a possible loss of control of the machine. An operator should not operate on a slope until he is thoroughly familiar with the equipment.

**Do not operate on slopes greater than 15 degrees.**

Refer to Slope Guide, page 12A when determining the degree of slope to be mowed.

It is strongly recommended that the operator drive the machine off of the slope, using extreme caution, if any sign of loss of traction is detected. Wait until the condition that caused the problem is resolved before attempting to operate on the slope again.

Terrain conditions can affect traction resulting in possible loss of control of the machine. Some of the conditions to be aware of are:

1. Wet terrain
2. Depressions in the ground; i.e. holes, ruts, washouts
3. Mounds of dirt
4. Soil type; i.e. sand, loose dirt, gravel, clay
5. Grass type, density, and height
6. Extremely dry conditions of grass
7. Tire pressure

The attachments mounted to the mower will also affect the way it handles on a slope. Be aware that each attachment's characteristics vary.

Another consideration is to always mow a safe distance (minimum of 10 feet 3.05 meters) away from drop-offs, retaining walls, drainage ditches, embankments, water, and other types of hazards to avoid a wheel dropping over the edge or to avoid the ground from breaking away and always be aware of what is located at the bottom of the slope. This will reduce the risk of the machine

suddenly rolling over causing serious injury or death. Extreme caution should be used when there is a hazard located at the bottom of the slope. Some examples are:

1. Water; i.e. lake, river
2. Cliffs, retaining walls
3. Roads, highways
4. Buildings
5. Rocks

These are just a few examples of situations when caution must be used when operating on a slope. There are many other possibilities too numerous to mention. Just remember to always exercise extreme caution when operating on any slope.

### **Children**

**Tragic accidents can occur if the operator is not alert to the presence of children.**

**Children are often attracted to the machine and the mowing activity. Never assume that children will remain where you last saw them.**

Never leave machine unattended with key in switch, especially with children present.

Children or bystanders may be injured if they move or attempt to operate the machine while it is unattended.

Always disengage deck blade switch & turn key to OFF position and

remove key. Keep children out of the mowing area and under the watchful care of

a responsible adult other than the operator. Be alert and turn the machine off if children enter the area. Before and while backing, look behind and down for small children.

**Never carry children, even with the blades off.** They may fall off and be seriously injured or interfere with safe machine operation. Children who have been given rides in the past may suddenly appear in the mowing area for another ride and be run over or backed over by the machine. Never allow children to operate the machine. Use care when approaching blind corners, shrubs, trees, the end of a fence or other objects that may obscure vision. Never allow children or others in or on towed equipment.

### **Drive Overtemp 2-Stage Shut Down Feature:**

**IMPORTANT  
READ!**

If drive motor exceeds programmed temperature, the motor speed will decrease by one half. If temperature continues to increase, drive will shut down at a higher programmed temperature. Allow motors 30-60 minutes to cool down. Please call your Mean Green Dealer immediately for possible solutions to Overtemp Shut down.

### **Safety start interlock system**

The machine is equipped with a safety start interlock system

consisting of the park brake switches, right control handle release activates safety interlock shutting down drives, blades and applying brakes.

### **Check mower safety start interlock system daily, prior to**

**IMPORTANT  
READ!**

**operation.** This system is an important mower safety feature. It should be repaired immediately if it malfunctions. Call your Mean Green Mower Dealer immediately. After turning the machine on, confirm that blades and drive motors do not engage until the right control lever is positioned to the left. Perform procedure before operating machinery daily!

### **Starting your mower:**

1. With key inserted, turn Master Power Ignition Switch on by rotating key clockwise to the On position.
2. Check for the appropriate speed mode by turning Drive Speed Control Knob counterclockwise to SLOW speed. (If applicable on certain models)

**NOTE: It is always recommended to start out in low mode/ slow speed.**

3. Pull Right Control Lever inward to activate drive system.
4. Pull up on Deck Blades On/Off Switch to start cutting blades for mowing.

**NOTE: ONLY engage blades when Drive Control Levers are in the NEUTRAL position!  
NEVER engage blades when moving!!**

5. Push Drive Control Levers Forward for forward motion and pull rearward for reverse motion. Electric Brake will engage 1.5 seconds after Drive Control Levers are returned to neutral.

## Stopping your mower:

1. Return Right and Left Drive Control Levers to the Neutral/Stop position.
2. Push down on Deck Blades On/Off Switch to turn OFF the blades.
3. Release Right Control Lever. Lever will spring outward automatically and engage safety interlock system.
4. Rotate key in Master Power Ignition Switch counter clockwise to the OFF position.

## Driving the mower



**DANGER:** Never make sudden stops or reverse direction, especially when maneuvering on a slope. The steering is designed for SENSITIVE response. Rapid movement of the drive control levers in either direction could result in a reaction of the machine that can cause serious injury.



After turning master key to ON position:

**To go forward**, push both Drive Control Levers forward an equal distance

**To go in reverse**, pull both Drive Control Levers rearward an equal distance

**To turn left**, move the right Drive Control Lever farther forward from neutral than the left Drive Control Lever.

**To turn right**, move the left Drive Control Lever farther forward from neutral than the right Drive Control Lever.

**Zero radius turn**, move one Drive Control Lever forward and the other Drive Control Lever back of neutral. This will allow the drive wheels to counter-rotate.

**To stop or decrease speed:** To stop, move both Drive Control Levers to neutral, middle position.

When going forward and want to decrease speed, pull back gently on both Drive Control Levers. When going in reverse and want to decrease speed, push forward gently on Drive Control Levers.



### For an emergency stop:

Release both Drive Control Levers. This will disengage drives, blades and engage brakes. Any sudden movement could cause the front of the mower to come off of the ground resulting in possible loss of control causing serious injury or death. Turn the master ignition key to the OFF position. This will shut down the traction drive system and the deck blade system.



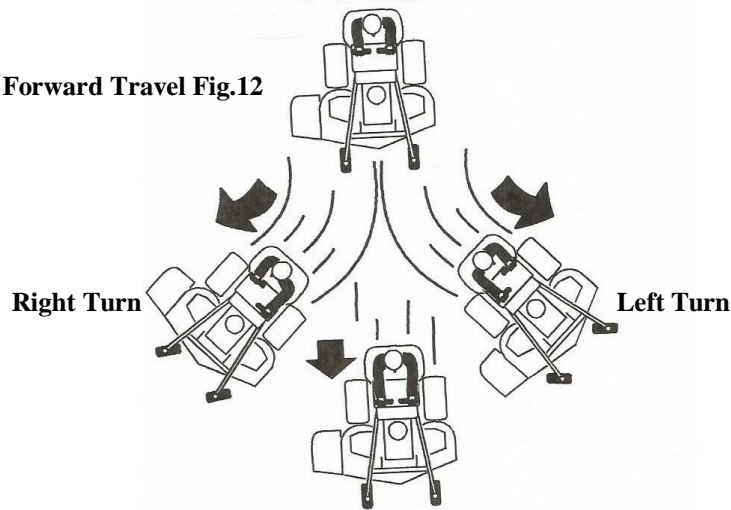
**WARNING:** Always be aware of what is behind the machine before backing up. Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing up.

**IMPORTANT:** Rapid movement of Drive Control Levers is not recommended as damage to the electric system components may occur.

**To increase speed**, increase the Drive Control Levers distance from neutral. The farther forward the Drive Control Levers are from neutral, the faster the machine will travel forward. The farther back the Drive Control Levers are from neutral, the faster the machine will go in reverse. Also changing the Drive Speed Control Knob (Fig.3F Page9) will increase or decrease the speeds of mower in forward, reverse and turning.



**Forward Travel Fig.12**



## **BASIC DRIVING**

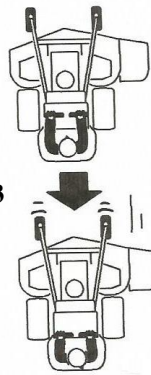
### **Forward Travel Practice**

Gradually move both Drive Control Levers – evenly FORWARD from neutral. Slow down & repeat. Fig.12

### **Reverse Travel Practice**

LOOK DOWN AND BEHIND, then gradually move both Drive Control Levers evenly BACK from neutral. Fig.13

**Reverse Travel Fig.13**



## **Advanced Driving**

### **EXECUTING AN END-OF ROW ZERO TURN**

Your Stand On Mower's unique ability to turn in place allows you to turn around at the end of a cutting row rather than having to stop and Y-turn before starting a new row.

To execute a left end-of row zero turn:

1. Slow down at the end of the row.
2. Move the RIGHT drive control lever forward slightly while moving the LEFT drive control lever back to center and then slightly back from center.
3. Begin mowing forward again.

**THIS TECHNIQUE TURNS THE MOWER LEFT AND SLIGHTLY OVERLAPS THE ROW JUST CUT – ELIMINATING THE NEED TO BACK UP AND RE-CUT MISSED GRASS.**

**Remember: The more you practice, the better your control of the stand on mower!**



## Operating suggestions



**DANGER:** Prior to operating the mower the operator should be thoroughly familiar with the proper use and operation of the equipment, should read the manual completely and thoroughly, and should have attempted slow moving maneuvers to become familiar with the operation of the equipment before attempting normal speed operation. An inexperienced operator should not mow on slopes or on uneven terrain and should always mow in Slow Drive Speed.



**WARNING:** If you lose steering control while operating the machine on a slope, release both Drive Control Levers. This will disengage drives and blades and engage the brakes. Turn key to OFF position. Call your Mean Green Mower Dealer to resolve problem before continuing to operate.



**WARNING:** The unit's steering control levers are very responsive: **Easy does it!** For smooth operation, move controls slowly, avoid sudden movement. Skill and ease of operation come with practice and experience. The machine can spin very rapidly. Use caution when making turns and slow down before making sharp turns.

**Inexperienced operators may have a tendency to over-steer and lose control.** Slow-moving, slow speed practice maneuvers are recommended to become familiar with these characteristics before attempting high speed operation.



**WARNING:** Sharp depressions or raised obstacles (such as gutters or curbs) should not be directly approached at high speed in an attempt to "jump" them as the operator could be thrown from the equipment. Approach at a slow speed and angle one drive wheel at the obstruction. Continue at an angle until the wheel clears and then pivot the opposite wheel around. When turning on soft wet turf, keep both wheels rolling either forward or backward. Pivoting on one stopped wheel can damage turf. This is especially important when mowing.

**Keep blades sharp.** Many professional mowing companies have additional sets of blades and change blades twice a day: once in the morning and again at noon. **Many problems** with incorrect cutting patterns **are due to dull blades** or blades which have been **sharpened incorrectly**. Information on sharpening blades is listed in this manual's maintenance section. In addition, most communities have individuals or companies which specialize in sharpening mower blades. **Blade sharpness should be checked daily.**



**DANGER:** Never work with blades while key is in the ignition switch. Always place deck blade switch in the **disengaged** position, place steering control levers in the neutral position and turn key to the OFF position, remove key from switch and disconnect battery cables by pulling inward on **RED** battery quick disconnect handle in battery box compartment! Block up mower when you **must** work under it. Wear gloves when handling blades. **Always check for blade damage** if mower strikes a rock, a branch or another foreign object during mowing!

**Direct grass discharge to right (with side discharge models),** away from un-mown area. Select a mowing pattern that directs grass discharge towards the outside, not towards center, of mowing area. Generally, this means using a pattern utilizing **left turns** because side discharge is to **right**. In any case, avoid throwing grass discharge onto un-mowed area because grass is then mowed "twice". Mowing

twice puts an unnecessary load on the unit and reduces mowing efficiency.

**When mowing a lawn for the first time** cut grass slightly longer than normal to avoid scalping uneven terrain. When possible, it is best to use the cutting height that was used in the past. When cutting grass taller than six inches, you may want to mow the lawn twice to achieve a better quality of cut.

**During normal mowing cut only about 1/3 of the grass blade.** Cutting more than that is not recommended unless grass is sparse or it is the end of the mowing season.

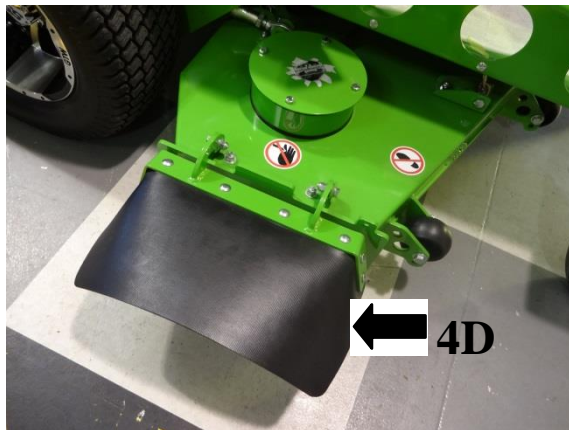
**Alternate mowing direction** to keep the grass growing straight and better dispersion of the clippings.

**Remember, grass grows at different rates** at different time of the year. Mow more often in the early spring to maintain the same cutting height. As the growth rate slows in mid summer, mow less frequently. If you cannot mow at a regular interval, mow at a high cutting height; then mow again two days later at a lower cutting height.

**Raise the cutting height of the mower** if the cutting width of the mower is wider than the previous mower. This ensures that uneven turf is not cut too short.

**Raise the cutting height of the mower** if the grass is slightly taller than normal or if it contains a high degree of moisture. Then mow it again with the cutting height set lower.

**WARNING:** Never direct discharge of material from mower deck towards bystanders. Do not operate the mower without the discharge chute (Fig.4D)(with side discharge models).



## Sound Power

The Stalker Stand On Mower has a sound pressure level of 76 dbA with an uncertainty value of 1-2 dbA. *This may vary depending on placement of mower and conditions.*

## Operating the Platform

### Operating the mower with the PLATFORM UP

Operating the mower with the platform up is recommended when:

- 1) Mowing small areas where the mower is too long
- 2) Mowing near drop-off's and steep inclines
- 3) Areas with obstacles and low hanging branches
- 4) Maneuvering up slopes
- 5) Loading/Unloading machine from trailers, ramps etc

### Operating the mower with the **PLATFORM DOWN** (FIG.18)

Operating the mower with the platform down is recommended when:

- 1) Mowing most areas
- 2) Driving down slopes
- 3) Large open mowing areas



Fig.18 Platform Down

**Putting the mower platform down:** Utilize top of foot to pull platform downward then place feet evenly onto platform (See Fig.18)

Step rearward from platform to exit platform. **NOTE:** Platform will automatically retract upward after operator exits platform.



Fig.19 Operator operating with platform down

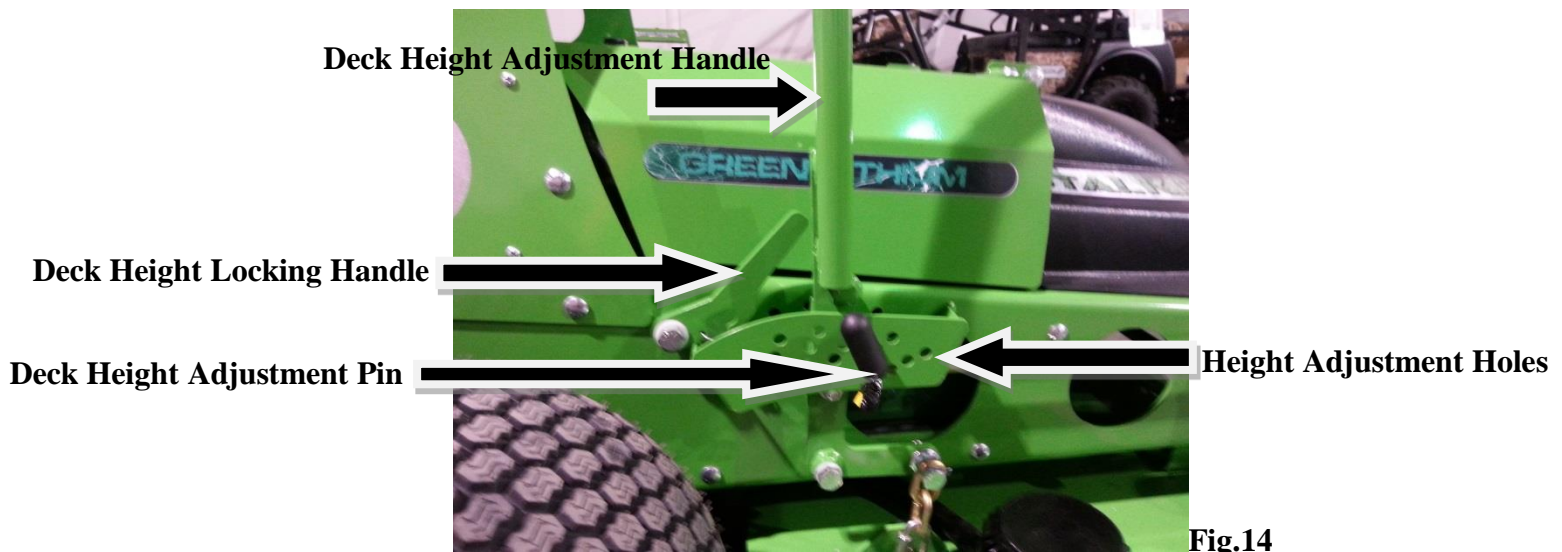
**IMPORTANT  
READ!****Deck cutting height adjustment (Located right side of mower chassis)**

Deck height is adjustable from 1" - 4.5 inches in ¼ inch increments with 15 deck height adjustments. (fig.14)

To adjust deck height – Relieve tension off of Deck Height Adjustment Pin by pulling rearward on Deck Height Adjustment Handle. Remove Deck Height Adjustment Pin and insert into desired Height Adjustment Hole. Release pressure on Deck Height Handle to allow handle to rest back onto pin.

**NOTE:** To lock deck height adjustment in highest position for travel or loading/unloading – Pull Deck Height Adjustment Handle completely rearward until handle locks in highest position. To lower deck from highest position – pull rearward on Deck Height Adjustment Handle *with one hand* next pull rearward on Deck Height Locking Handle *with other hand*, proceed to lower Deck Height Adjustment Handle to desired height.

**\*\* See Illustration Fig.14\*\***

**Anti-scalp wheels (Fig.15)**

Anti-scalp wheel kits are standard on Mean Green Mower units.

These anti-scalp wheels are designed to minimize scalping when mowing on rough uneven terrain. After setting the cutting height, adjust the anti-scalp wheels so they extend below the deck but **do not contact the ground**.

They should always be at least 1/4" to 3/4" below the deck. With the unit sitting on a flat level surface, the wheel position can be adjusted up or down as needed from 3/4" to 1-3/4" below the blade surface. Move the wheels up or down, in 1/2" increments, using the different axle mount holes in the wheel mount bracket. (if applicable on model)







### **Important:**

#### **Emergency Manual Drive Brake Release Levers**

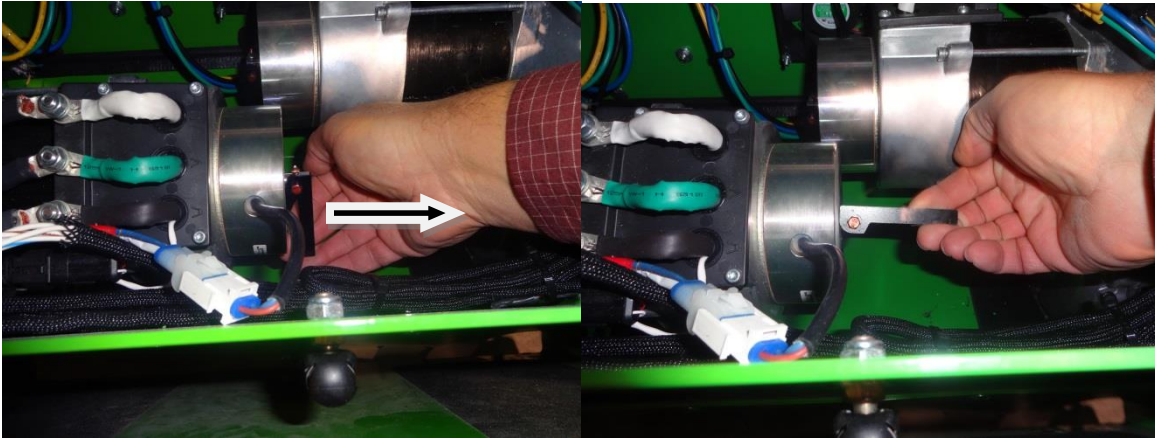
##### **If towing or manual pushing is needed:**

Located behind electronics bay cover and operator cushion - **2** each levers (accessible from rear of mower)  
(Fig.6A & Fig.6B)

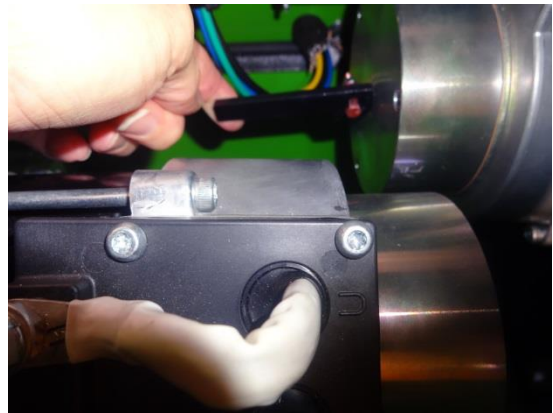
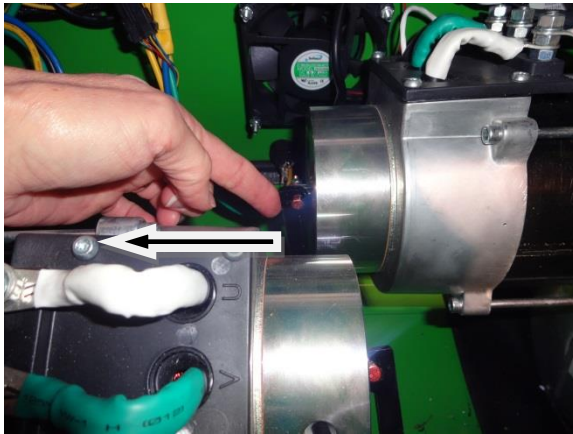
**NOTE: Electronics bay cover must be removed to access levers!!**

Pull both levers **INWARD** to release drive brakes and **PUSH OUTWARD** both levers to engage drive levers.(Fig.6A & Fig.6B)

**NOTE: Never drive mower with levers released. Always push levers back to the CLOSED position before driving! Failure to re-engage drive levers could cause serious damage to your mower and void mower warranty!!!!**



**Fig.6A Left Drive Motor Emergency Manual Drive Brake Release Lever**



**Fig.6B Right Drive Motor Emergency Manual Drive Brake Release Lever**

# MAINTENANCE & ADJUSTMENTS

## Safe Servicing Practices

*This product is capable of amputating hands and feet and throwing objects. Always follow all safety instructions to avoid serious injury or death.*

**NOTE:** Always remove key and disconnect battery cables by pulling inward on **RED** battery quick disconnect handle in battery box compartment when any maintenance or repairs are performed on mower unit!

## Service

Park the mower on level ground. Make sure that steering control levers are in the neutral position, deck blade switch in OFF position, raise deck, rotate key to OFF position, remove key from switch and disconnect battery cables by pulling inward on **RED** battery quick disconnect handle in battery box compartment.

**IMPORTANT!** Wait for all movement to stop before adjusting, cleaning or repairing. Repairs or maintenance requiring power should be performed by trained maintenance personnel only. Read and observe safety warnings in front of manual.

• **Any maintenance operation that requires the removal of safety covers must be performed by a trained service technician.**

Before working on or under the deck, make certain master power ignition switch is OFF and key is removed and deck blade switch cannot be accidentally started and disconnect battery cables by pulling inward on **RED** battery quick disconnect handle in battery box compartment.

**IMPORTANT!** Repairs or maintenance requiring power should be performed by trained maintenance personnel only.

Use a stick or similar instrument to clean under the mower making sure that no part of the body, especially arms and hands are under mower.

Keep your machine clean and remove any deposits of trash and clippings, which can cause fires and overheating.

Allow machine to cool before storing.

**Clean flammable material from machine. Prevent fires by keeping battery compartment, deck and operator's station clean of accumulated trash, grass clippings, and other debris.**

Clean battery compartment, drive motor compartment, mower deck, seat etc. of all dirt and debris. **DO NOT spray unit with water.** Do not use, solvents, hard cleaners or abrasives. **Use only compressed air.**

Always wear adequate eye protection when servicing the batteries, or when grinding mower blades and removing accumulated debris. Never attempt to make any adjustments or repairs to the mower's drive system, mower deck or any attachment while the traction drive system is running. Repairs or maintenance requiring power should be performed by trained maintenance personnel only.

Never work under the machine or attachment unless it is safely supported with jack stands. Make certain machine is secure when it is raised and placed on the jack stands.

The jack stands should not allow the machine to move when the traction drive system is running and the drive wheels are rotating. **Use only certified jack stands.** Use only appropriate jack stands, with a minimum weight rating of 2000 pounds (907.2 kg) to block the unit up. Use in pairs only. Follow the instructions supplied with the vehicle stands.

Do not touch hot parts of machine.

Keep nuts and bolts tight, especially the blade attachment bolts. Keep equipment in good working condition.

Never tamper with safety devices. Check their proper

operation regularly.

Turn the key to the OFF position before unclogging the discharge chute.

Never clear the discharge chute with the machine running. Turn the key to the OFF position and be sure the blades have stopped before cleaning. Use a stick to clear a plugged discharge area. **Never use your hand!**

Stop unit, and allow blades to stop before unclogging chute.

Grass collection system components are subject to wear, damage and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check components and replace with manufacturer's recommended parts, when necessary.

Exercise caution when working under the deck as the mower blades are extremely sharp. Wear gloves and use extra caution when servicing them.

Use only genuine Mean Green Mower parts to ensure that original standards are maintained.

**NOTE:** Always remove key and disconnect battery cables by pulling inward on **RED** battery quick disconnect handle in battery box compartment when any maintenance or repairs are performed on mower unit!

Always disconnect batteries when transporting unit.

Keep unit free of grass clippings, leaves and other debris.

**DO NOT** spray with water to clean unit. Use only compressed air. Wear adequate eye and hearing protection when cleaning the unit.

Always wear safety glasses and protective gear near batteries.

Use insulated tools.

## Regular Maintenance

Regular maintenance is the best prevention for costly downtime or expensive, premature repair. The following pages contain suggested maintenance information and schedules which the operator should follow on a routine basis. For more detailed information order the correct parts manual for your unit.

Remain alert for unusual noises, they could be signaling a problem. Visually inspect the machine for any abnormal wear or damage. A good time to detect potential problems is while performing scheduled maintenance service. Correcting the problem as quickly as possible is the best insurance.

**Daily inspect** mower for grass clippings and wire and string tangles. The underside of the mower deck may collect a buildup of grass clippings and dirt, especially when grass is wet or has high moisture content. This build-up will harden, restricting blade and air movement and will probably show a poorer quality of cutting. Therefore it should be removed routinely.

To do this it will be necessary to raise and block the deck, using jack stands or blocks, in the full up position and scrape the build-up from underneath.

Some repairs require the assistance of a trained service mechanic and should not be attempted by unskilled personnel.

Consult Mean Green Mower Dealer when assistance is needed.



**Torque Values: WARNING:** Particular attention must be given to tightening the drive wheel lug nuts and blade spindle bolts. Failure to correctly torque these items may result in the loss of a wheel or blade, which can cause serious damage or personal injury. Call your Mean Green Mower Dealer for assistance.



Torque values are given below:

Ft.-lbs.	Nm
Wheel (lug) Nuts.....	65-75.....88.14-101.7
Blade spindle bolt bottom..	50.....67.8

**Lug nuts only** - It is recommended that these be checked after the first 2 hours of operation, initially, every 100 hours and following removal for repair or replacement.

### Tires

It is important for level mowing that the rear tires have the same amount of air pressure. The recommended pressures are: 12 psi in rear tires. Front tires are either no flat tires (do not require air) OR pneumatic tires with the recommended pressures of 12 psi.

### Lubrication

Use SAE multi-purpose grease for front wheel bearings.

**IMPORTANT:** Recommended maintenance at the beginning of each mowing season AND every 50 hours of operation.



Lubricate Bearings  
Front Wheels

### Electrical system

This mower operates on a 48 volt electrical system. Refer to the *Electrical* section of this manual for detailed information. Electrical System Located Behind Operator Knee Pad Panel.

(Fig.5E Pg.25) for instructions on how to access electrical compartment!

### Mower blade maintenance

Check the mower blades daily, they are the key to power efficiency and well groomed turf. Keep them sharp, a dull blade will tear rather than cut the grass, leaving a brown ragged top on the grass within a few hours. A dull blade also requires more power. Replace any blade which is bent, cracked or broken.



**WARNING:** Never attempt to straighten a bent blade by heating, or weld a cracked or broken blade as the blade may break and cause serious injury. Replace worn or damaged blades.



**DANGER:** Never work with blades while key is in the ignition switch. Turn key to OFF position, remove key from switch and disconnect battery cables by pulling inward on **RED** battery quick disconnect handle in battery box compartment!

Block up mower when you must work under it. Wear gloves when handling blades. Always check for blade damage if mower strikes a rock, branch or other foreign objects during mowing!



**WARNING:** Always wear adequate eye protection when grinding mower blades.

## Mower blade removal

Use a 9/16" wrench or socket to remove the 3/8" cap screw holding the blade to the motor shaft from underneath. It may be necessary to use a 1-1/4" channel lock pliers to keep the blade adapter from turning while removing blade cap screw.

**NOTE:** The blade adapter will come off when the blade cap screw is removed. Touch-up sharpening can be done with a file.

Check the blades for balance following grinding. A commercial balancing tool is available through most hardware supply stores, or balancing can be done by placing the blade on an inverted line punch or 1/2" bolt. Blade should not lean or tilt. Spin the blade slowly, blade should not wobble. If blade is out of balance, true it up before reinstalling.

Lay the blade on a flat surface and check for distortion. Replace any distorted blade.

## Mower blade installation

Do not re-use spindle bolts which have stripped, worn or undercut threads.

Make sure that the blade adapter is seated properly on the blade motor shaft before tightening the blade cap screw. Use a 9/16" socket with a torque wrench to re-attach the blade to the motor shaft from underneath. It will be necessary to use a 1-1/4" channel lock pliers to keep the blade adapter from turning. Torque cap screws on motor shafts to 50 foot-pounds (67.8 Nm) when reinstalling blades.

**IMPORTANT:** The blade sail (curved part) must be pointing upward toward the inside of the deck to ensure proper cutting.

**IMPORTANT:** When mounting blades, rotate them after installation to ensure blade tips do not touch each other or sides of the mower.



**WARNING:** Failure to correctly torque the bolt may result in the loss of the blade which can cause serious injury.



**WARNING:** Mower blades are sharp and can cut. Wear gloves and use extra caution when servicing them.

## ELECTRICAL SYSTEM

### Electrical System Safety

Remove key, disconnect battery cables by pulling inward on **RED** battery quick disconnect handle in battery box compartment and read owner's manual before adjusting or repairing unit.

Always remove key and disconnect battery cables by pulling inward on **RED** battery quick disconnect handle in battery box compartment before working on this unit.

Always disconnect battery cables by pulling inward on **RED** battery quick disconnect handle in battery box compartment when transporting unit.

Keep unit free of grass clippings, leaves and other debris.

**DO NOT spray water to clean unit. Use only compressed air.** Wear adequate eye protection when cleaning the unit.

Always wear safety glasses and protective gear near batteries. Use insulated tools.

Clean battery compartment, drive motor compartment, mower deck, seat etc. of all dirt and debris. **Do not spray unit with water.** Do not use, solvents, hard cleaners or abrasives. **Use only compressed air.**

Avoid injury. With key in ON position mower blade can

engage when deck clutch switch is engaged, even if drive motor is not turning. Keep area clear of bystanders when engaging clutch switch.

All maintenance and storage areas should be properly ventilated in accordance with applicable fire codes and ordinances to avoid fire hazards.

Never allow flames, sparks or smoking near batteries.

Keep batteries out of reach of children.

Always keep protective shields, covers and guards in place and securely fastened. If they become damaged, repair or replace immediately. **Never modify or remove safety devices.**

## Electrical System Information

The Mean Green Mower is powered by a 48 volt electrical system. It consists of the following components:

1. Deck controllers (3) (Depending on model)
2. Deck Motors (3) (Depending on model)
3. Solenoids (3)
4. Accelerator - right (1)
5. Accelerator - left (1)
6. Digital battery display (1)
7. Integrated electric transaxle (2)
8. Lithium Energy Modules (LEMs) (2)

## Accessing Electrical Compartment – (Located at rear of mower behind lower operator cushion). Fig.5E

Remove electronics bay cover and operator cushion by removing 4 fasteners.



Fig.5E

## Component Maintenance

**IMPORTANT:** Maintenance for the various electrical components found on the Mean Green Mower should only be performed by a Mean Green Mower trained technician.

**IMPORTANT:** When battery voltage becomes low, the mower blades will stop, although the drive motors will continue to run enabling driver to continue to drive unit. When the batteries discharge to this point they require recharging. **The unit should immediately be returned to the battery charging area and the unit connected to the battery charger.**



**WARNING:** Do not attempt to cross roads or railways with low battery levels.

## Battery Safety

Battery posts, terminals, and related accessories may contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.



**WARNING:** Charge batteries in an open well ventilated

area, away from spark and flames. Unplug charger before connecting or disconnecting from the charging port. Always wear safety glasses and protective clothing/gear. Use insulated tools.



**WARNING:** Sparks can cause a battery gas explosion which will result in serious personal injury.

Prevent the battery terminals from touching any metal mower parts when removing or installing the battery. Do not allow metal tools to short between the battery terminals and metal mower parts. Use insulated tools. Always keep protective battery cover and rear cover in place.



**WARNING:** Explosive gases from batteries can cause death or serious injury. Poisonous battery fluid contains sulfuric acid and contact with skin, eyes or clothing can cause severe chemical burns.



**WARNING:** Follow first aid directions for contact with battery fluid. Get medical attention immediately.



**WARNING:** Incorrect battery cable routing could cause damage to the mower and battery cables. This can cause sparks which can cause a battery gas explosion which will result in serious personal injury.



**WARNING:** Always disconnect battery cables by pulling inward on **RED** battery quick disconnect handle in battery box compartment when transporting unit.

### Battery Connectors

The battery connectors are located under the battery cover.

Always disconnect battery cables by pulling inward on **RED** battery quick disconnect handle in battery box compartment before performing maintenance on the unit.

### Battery Charger

Use only the battery charger provided with the Mean Green Mower.

Charger options vary for the Mean Green Mower. Certain models are equipped with an **on and off** switch and others **turn on automatically when plugged into outlet**. **NOTE: Always plug RED charger plug (fig.4G pg.29) into mower charger plug (fig.4E or 4F pg.28) and THEN plug battery charger into 110-120 volt household GFCI protected outlet.**

### Battery Maintenance

Your Mean Green Mower is powered by 2-4 Lithium Module (LEMs) which, when maintained properly, will provide years of useful life. For proper care, adhere to the following instructions:

1. Always charge batteries after each use, regardless of how little used. Batteries must be attached to a plugged in battery charger with the charger power switch ON when the unit is not being used.



**WARNING:** Charge only with a Mean Green Mower approved charger. Do not use battery chargers other than those recommended by Mean Green Mowers. Incorrect battery charging will void warranty and can lead to equipment damage, serious injury or death.

2. Check that battery cables are securely tightened to batteries each time you service the battery.

3. Keep grass, dirt and debris from collecting near battery terminals.

4. Batteries are not to remain in a discharged state or damage to the batteries will occur.

5. Charge batteries indoors in a well ventilated and dry location away from sparks or flames. Never expose charger to rain, vapor or liquid (dry location use only).



6. **Charge only** Lithium Modules (LEMs) provided with the Mean Green Mower.

7. Do not touch un-insulated portion of charger (terminal pins) of output connector. (if applicable on model)

8. Do not use with defective cords and wires. Replace defective cords and wires immediately.

**IMPORTANT:** Batteries must be attached to a plugged in battery charger with the charger power switch ON when the unit is not being used. Failure to keep batteries fully charged will reduce battery life and void battery warranty.

### Battery Charging

**NOTE: Lithium Modules can be charged either in or out of mower unit.**

**NOTE: The Mean Green Stalker Stand On Mower can be operated with 1 or 2 LEM Lithium Energy Modules.**

LEM60 lithium modules – approx. weight 69 lbs.

**! WARNING: Use Extreme Caution When Lifting Batteries Out Of Mower Unit. Serious Injury Could Occur If Battery Is Mishandled or Dropped!!**

1. Lift up battery cover (Fig.8A)

2. Plug charger plug into External Charging Port (plug found above **closed** battery compartment cover Fig.4F pg.28 or at rear of mower below electronics bay door on select models Fig.4E pg.28) OR operator can also plug red charger plug into internal charging port (if needed) found in battery compartment Fig.8A.

Plug red charger plug into red mower charge plug found in battery compartment. (Fig.8A)

**NOTE:** Plug will only fit one way into the port. Make sure it is properly aligned before inserting.

3. Plug other end of charger into 110-120 volt household GFCI protected outlet that is rated at 15 amps or higher.

4. Turn charger switch to the ON position (on certain models) OR unit will automatically turn on when unit is plugged into outlet. The cooling fan (on certain models) may or may not engage depending on battery charge level and charger temperature.

### Battery Compartment

Rear of Mower

(Fig. 8A)

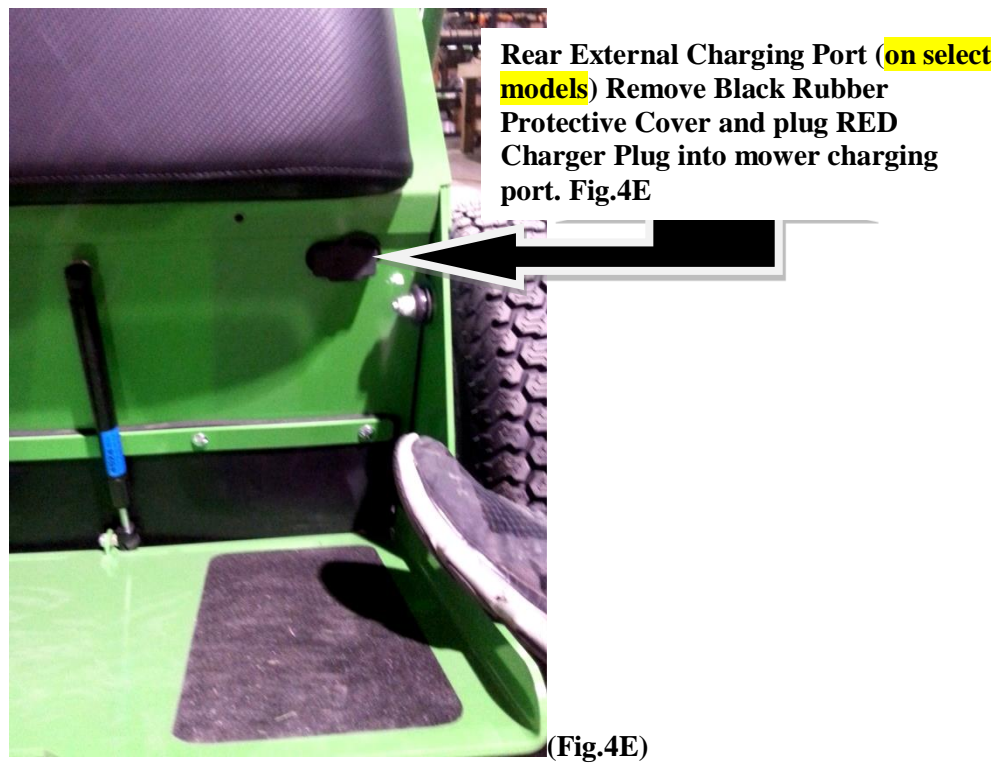
**RED Battery Quick Disconnect Handle**

**Internal Charging Port**

**Anderson Connector – to connect one LEM battery to another in “daisy chain fashion.”**

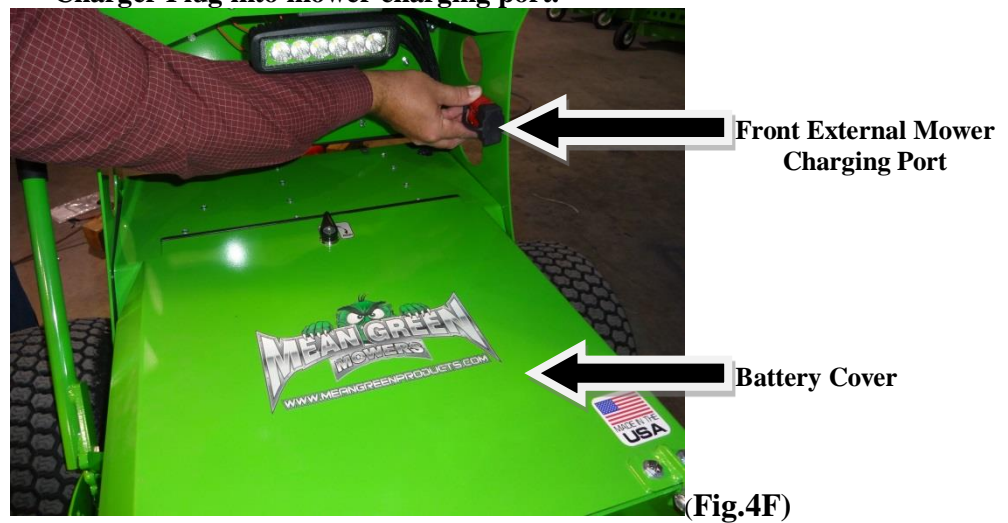
**Battery Cover**

Front of Mower



## Front of Mower View

**Front External Charging Port (Fig.4F) - Remove Black Rubber Protective Cover and plug RED Charger Plug into mower charging port.**



**External Mower  
Charging Port**



**Red Charger Plug From  
Charger**

(Fig.4G)

### Mower Charger



**Battery Charger Plug** –plugs into  
110-120 volt household GFCI protected  
outlet that is rated at 15 amps or higher

**RED Charger Plug** - Connects to  
mower charging port.

(Fig.10)



**IMPORTANT: ALWAYS LEAVE BATTERY COVER  
IN THE OPEN POSITION THROUGHOUT CHARGING TIME. NEVER CHARGE WHEN CLOSED!!**

5. Allow 1-12 hours for a full battery charge (**depending on battery charger option**).  
The green light indicates batteries are Fully Charged OR the red LED indicator will read 0.00  
Amps. Leaving batteries on charger longer than 12 hours does not harm the batteries. The charger will  
not overcharge batteries.
6. When ready to use mower again after charging, always turn charger OFF before  
disconnecting charger from mower. Disconnect charger cord from wall outlet then from the mower.
7. Close back battery cover. (Fig. 8A pg.27) **Note:** Be sure charger is positioned where  
air can flow unrestricted into and out of charger.

### Charging Recommendations:



**WARNING: Do not smoke** while servicing the batteries.



**WARNING:** Always wear safety glasses and protective  
clothing near battery. Use insulated tools.

1. Lithium Modules do not develop a memory and need not be fully discharged before recharging.
2. Over the  
winter season, when mower is not used regularly, the charger can  
be kept plugged into the mower to maintain a full charge on the batteries. Batteries left  
uncharged will slowly discharge. Before initial use each spring season, be sure batteries have  
a full charge before mowing.
3. If charger is not left plugged in, the batteries should be  
fully charged every 30 days to maintain battery life.
4. When charging, be sure charger cooling  
fan inlet and outlet are not blocked.

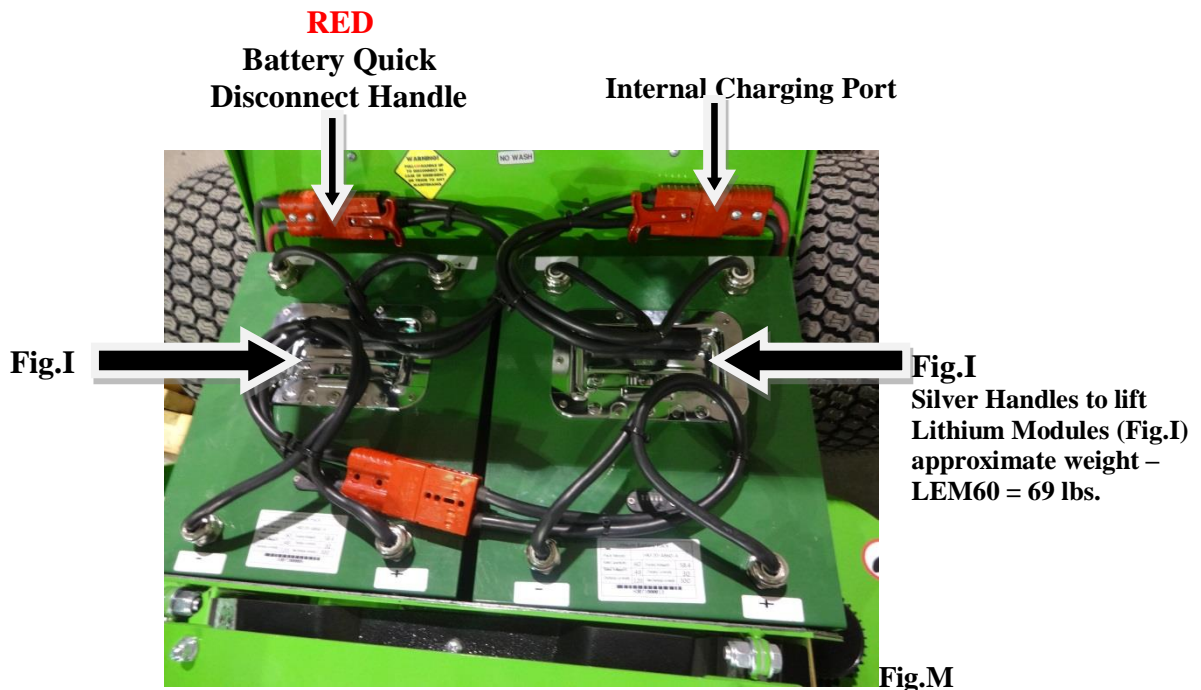
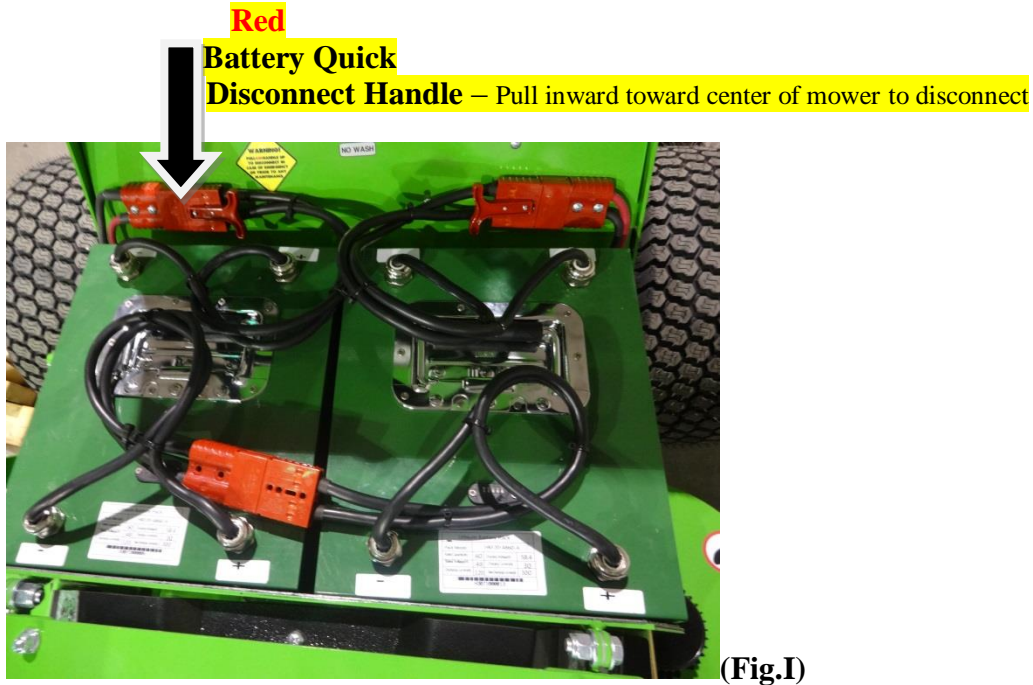


### Disconnecting the Batteries (LITHIUM MODULES)

**NOTE:** ALWAYS disconnect battery cables by pulling inward on **RED** battery quick disconnect handle in battery box compartment before **ANY** maintenance is performed on mower unit.

**IMPORTANT!!  
READ!**

1. Open battery compartment and lift up battery cover to expose Lithium Modules.
2. Grasp **RED** BATTERY QUICK DISCONNECT HANDLE by wall of mower. (Fig.I)
3. Pull **INWARD** on lever until disengaged from wall plug. (Fig.I)
4. Unplug all red battery connectors by grasping each red plug and pull apart. **DO NOT PULL ON BATTERY CABLES!! ONLY pull on connectors!!**
5. Battery may be removed (if needed) by lifting Lithium Module by silver handle on top of each battery case. (Fig.M)



### Reconnecting the Batteries (Lithium Modules)

1. Open battery compartment and lift up battery cover to expose Lithium Modules.
2. Grasp **RED** BATTERY QUICK DISCONNECT LEVER (Fig.M)

3. Push lever OUTWARD into battery compartment wall plug until “CLICK” is heard with complete connection. Take unused battery connector to plug into the next battery. Continue connecting batteries in a line until ALL batteries are connected to each other and ONLY one connector is left. The last unused connector can be used to plug into the internal charging port for charging ALL connected batteries at one time.
4. Close battery compartment lid and turn lever to close.
5. Mower is ready for use.

### **Battery Compartment OPEN/CLOSE Handle and Battery Lock (Fig.20)** (Located on top of battery compartment door)

Turn handle to OPEN position and LIFT UP on battery compartment cover to access Lithium Energy Modules (LEMs).

PUSH DOWN on cover and turn handle to closed position to secure battery compartment cover when operating mower.

Battery Lock available for securing Lithium Modules within mower unit.

**Fig. 20**



### **Battery Storage**

To maximize battery life it is best to fully charge batteries shortly after each use. The Mean Green Mower charger is designed to remain plugged into the vehicle and turned ON during storage. If the charger remains on and connected, it will automatically maintain the charge level of the battery pack. All batteries self-discharge over time. **NOTE: If the mower cannot remain plugged in and on charger then it is required that the battery pack be charged for a minimum of 12 hours every 30 days. Failure to maintain the battery charge level will void the battery warranty.**

## **TROUBLESHOOTING**

### **SYMPTOMS & PROBABLE CAUSES**

### **SUGGESTED REMEDIES**

### **FOR ANY ELECTRICAL PROBLEMS**

\*\*\*\*RESET Mower Electronics by Switching Ignition Key to OFF position for approximately 5 seconds & then back to ON position.\*\*\*\*\*

### **Mower blades stop while mowing**

When battery voltage becomes low, the mower blades will stop, although the drive motors will continue to run enabling driver to continue to drive unit. When the batteries discharge to this point they require recharging. **The unit should immediately be returned to the battery charging area and the unit connected to the battery charger.**

### **Uneven cutting height**

The blade(s) are not sharp. Sharpen the blades.

A cutting blade(s) is/are bent. Install new cutting blade(s).

The deck is not level - Contact your Mean Green Products Dealer.

The underside of the deck is dirty. Clean the underside of the deck.

Tires improperly inflated. Adjust air pressure to proper psi (see pg.23)

A blade spindle is bent. Contact your Mean Green Products Dealer.

### **Loss of deck operation**

The deck fails to operate with fully charged batteries.

RESET Mower Electronics by Switching Ignition Key to OFF position for approximately 5 seconds & then back to ON position. If this does not remedy the problem - Contact your Mean Green Mower Dealer.

### **Mower will not start**

Check that key is in the ON position.

Check all battery connections in back battery compartment.

Make sure batteries are charged.

Check to see that ALL circuit breakers are not tripped.

### **Mower blades stop due to low charge & mower will not move**

Turn blades off, turn key to OFF position, wait approximately 5 seconds and then back to ON (this resets computer)

If manual operation is needed to return to charging station or to move mower without battery power, pull both Emergency Drive Brake Release Levers INWARD to release drive brakes (located behind electronics bay cover and operator knee cushion and at the end of each drive motor (2 each levers **SEE Page 20 Fig.6A & 6B**) and push or tow mower **slowly**.

**NOTE: Never drive mower with levers released. Always push levers back to the UP position before driving! Failure to re-engage drive levers could cause serious damage to your mower and void mower warranty!!!!**

## **STORAGE**

When storing the unit at the end of the mowing season, the following steps should be taken to ensure readiness for the next mowing season.

1. Remove all grass, dirt, and trash from mower.

**IMPORTANT:** Wash the machine with a mild detergent and **small** amount of water. **Do not pressure wash the machine. DO NOT saturate machine with water!** Avoid excessive use of water, especially near the control switches and mower deck motors (located on deck of mower)

**DO NOT** get water in electrical compartment or in battery compartment!!!

**IMPORTANT: Excessive water use may void warranty if guidelines are not followed!**

2. Check thoroughly for any worn or damaged parts that need replacing and order them from your dealer.

3. Thoroughly lubricate wheel bearings, according to lubrication instructions.

4. Fully charge batteries.

5. Do not deflate tires.

6. The mower should be stored in a well ventilated, clean

and dry place as the battery charger cannot be used in a wet environment. Connect the battery charger to the charger port. **Leave battery compartment open!**

Always keep the batteries fully charged. Especially important to prevent battery damage when the temperature is below 32°F (0°C).

## **New season preparation**

Before starting the mower following post season storage, the following servicing is required:

1. Clean machine, removing trash and dirt accumulation.

2. Review safety precautions listed in this manual.

3. Check and inflate rear tires to recommended pressure of 12 psi. If No Flat tires on front, no air required. If pneumatic tires on front, recommended pressure is 12 psi.

4. Make sure that batteries are fully charged.

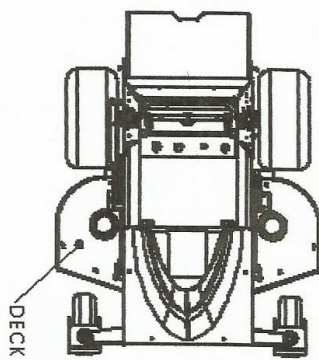
5. Grease wheel bearings (SAE multi-purpose grease)

## Lithium Energy Module Maintenance

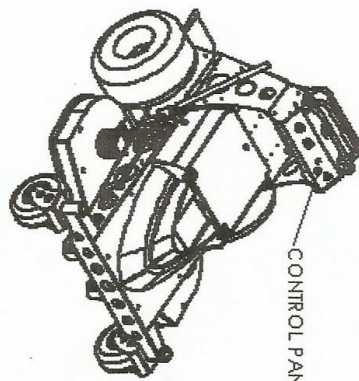
In order to prolong the battery module cycle life and make sure the module stays in good condition, please read the following instructions.

1. Whenever a battery pack is fully discharged and turned off, DO NOT USE IT AGAIN until it is recharged. Over discharge of the battery pack means the battery life will be shortened and the battery may become permanently damaged.
2. Whenever a battery pack is fully discharged and turned off it is best to recharge the battery as soon as possible, there is no need to fully charge, it will even be beneficial if you only charge the module for 5~10 minutes. It is best to recharge it within 24 hours.
3. For the charging, charge every module separately as often as possible. Certain module pairs (MODULE A, and MODULE B) can be charged in parallel (while hooked together), but, each module should be charged separate at least every 20-30 charging cycles or when total run time is reduced..
4. Before connecting in parallel, please make sure the modules have the SAME SOC(state of charge or Voltage). Different SOC means different voltage and may charge & discharge to each other, we do not suggest for that use.
5. If the battery module will not be used for a long time (several days or weeks), please disconnect the connectors between modules and loads.
6. For long term storage, please keep the State of Charge 'SOC' at around fifty percent (50%) of the battery packs fully charged voltage level. To reach that point you can fully discharge the battery pack and then recharge the pack in half the charging time.
7. For long term storage, please discharge and recharge the battery pack at least once every 2 or 3 months.
8. For long term storage, please make sure the storage temperature does not go below -10° C or above 55° C, the best is 15~45° C.
9. The best working environment of the battery module is 10 ~ 45 °C. Battery modules can be used at -20~45 for discharge, and 0 ~ 45° C for charge.
10. Avoid severe vibration. Do not throw or drop the battery pack.



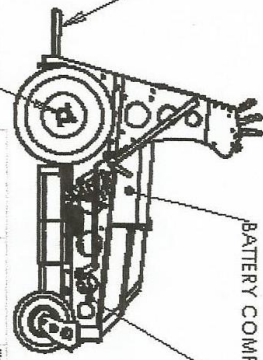


DECK



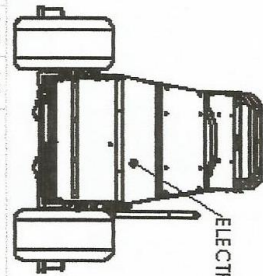
CONTROL PANEL

FOOT PAD



BATTERY COMPARTMENT

CHASSIS



ELECTRONICS BAY

ELECTRONIC DRIVE

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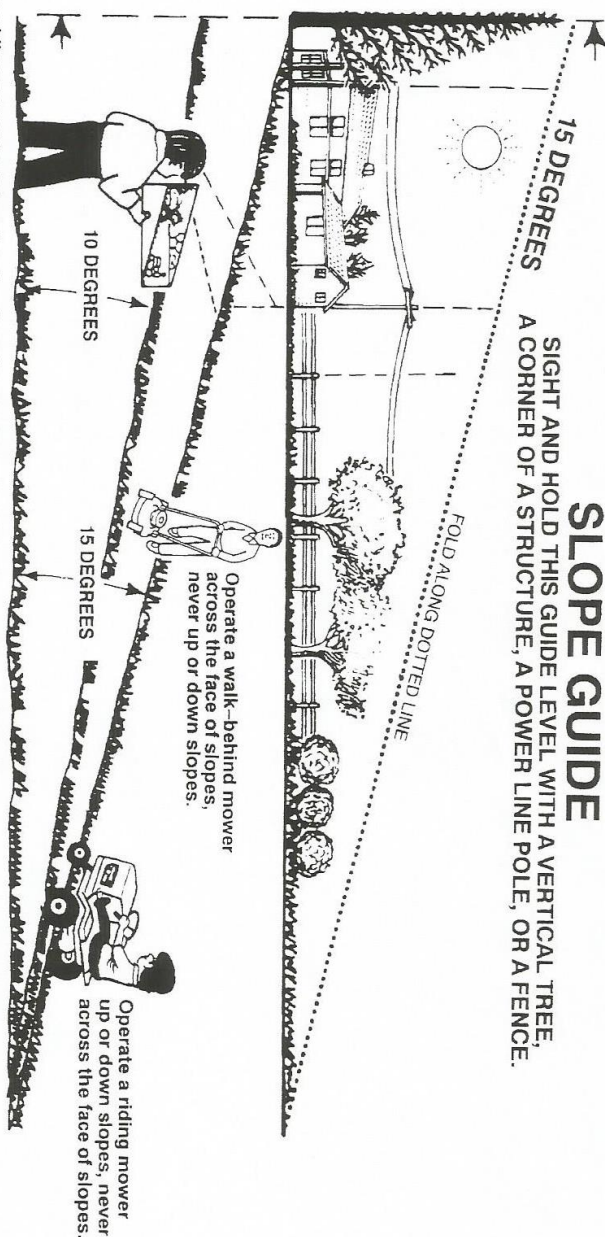
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MEAN GREEN PRODUCTS		DRAWN BY: J. H. HARRIS		DATE: 10-2-13	
TITLE:		CHECKED BY: J. H. HARRIS		DATE: 10-2-13	
MCP-48 SK MAIN ELEMENTS		DESIGNED BY: J. H. HARRIS		DATE: 10-2-13	
REV		DRAWN BY: J. H. HARRIS		DATE: 10-2-13	
SEE DWG. NO. SK002		DRAWN BY: J. H. HARRIS		DATE: 10-2-13	
SCALE: 1/20 WELD HT:		DRAWN BY: J. H. HARRIS		DATE: 10-2-13	
SHEET 1 OF 1		DRAWN BY: J. H. HARRIS		DATE: 10-2-13	



## Slope Guide



On a riding mower to determine if a slope is safe to mow: (1) disengage the blade(s), (2) put the unit in reverse, and (3) try to back straight up the slope. If you can back up the slope, it is generally safe to mow. However, if you do not feel safe, or if you are not completely sure, use this guide and do not mow a slope that is greater than 15 degrees. If the riding mower is used with a pull-behind or rear mounted attachment, do not operate the unit on a slope that is greater than 10 degrees.

A 15 degree slope is a hill that increases in height at approximately 2.5 feet in 10 feet.  
A 10 degree slope is a hill that increases in height at approximately 1.7 feet in 10 feet.



Use extreme care at all times, and avoid sudden turns or maneuvers. Follow other instructions in this manual for safety in mowing on slopes. Operate a riding mower up or down slopes, never across the face of slopes. Operate a walk-behind mower across the face of slopes, never up or down slopes. Use extra care when operating on or near slopes and obstructions.

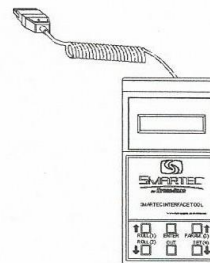
# TROUBLESHOOTING

## NOTE:

- Digital interface codes beginning with 02A refer to the main drive system. A code beginning with 16A refers to the Digital Display.
- The first 2 columns of the troubleshooting guide will refer to the codes found on either the digital display, or LED light on the dash of your mower.
- Smartec Interface Tool can be used for detailed diagnostic troubleshooting(Tool Functions, Page 23).



Digital Display



Smartec Interface Tool

Troubleshooting Guide					
Code 02	LED Flash Code	Symptom	Smartec Interface Tool	Why	How to Repair
02A11	1-1	No Drive	Watchdog	Internal diagnostic malfunction.	Cycle key, if alarm persists traction controller will need to be replaced.
02A12	1-2	No Drive	EEPROM KO	Internal diagnostic malfunction.	Cycle key, if alarm persists traction controller will need to be replaced.
02A13	1-3	No Drive	AUX OUTPUT KO	Output did not respond to command.	Verify wire plug connection of fail safe brake. Repair or replace connection as needed. Replace fail safe brake if alarm persists.
02A14	1-4	No Drive	LOGIC FAILURE # 3	Internal diagnostic malfunction.	Cycle key, if alarm persists traction controller will need to be replaced.
02A15	1-5	No Drive	LOGIC FAILURE # 2	Internal diagnostic malfunction.	Cycle key, if alarm persists traction controller will need to be replaced.
02A16	1-6	No Drive	LOGIC FAILURE # 1	Low battery charge, loose or shorted connection at key switch.	Charge battery(s) and replace as needed. Verify, repair or replace wire connection at key switch as needed. If alarm persists traction controller will need to be replaced.
				Excessive battery charge, loose or shorted connection at key switch.	Verify correctly charged battery(s). If alarm persists traction controller will need to be replaced.
02A17	1-7	No Drive	VMN LOW	Low battery charge, loose or shorted connection at drive motor or traction controller.	Charge battery(s). Verify, repair or replace connections at drive motor and traction controller as needed. If alarm persists traction controller will need to be replaced.
02A18	1-8	No Drive	VMN HIGH	Excessive battery charge, loose or shorted connection at drive motor or traction controller.	Charge battery(s). Verify, repair or replace connections at drive motor and traction controller as needed. If alarm persists traction controller will need to be replaced.
02A19	1-9	No Drive	Contactor Closed	Contactor has been manually shorted. Short between contactor and positive battery connection.	Verify, repair or replace connection between contactor and positive battery connection as needed. Replace contactor if alarm persists.
02A21	2-1	No Drive	Contactor Open	Low battery charge, short between contactor and positive battery connection.	Charge battery(s) and verify, repair or replace connection between contactor and positive battery as needed. Replace contactor if alarm persists.
02A22	2-2	Reduced Drive Speed	Ebrake KO	Brake has malfunctioned during start sequence.	Replace Fail Safe Brake.
		No Drive	Ebrake not ok	Fail safe brake has malfunctioned during start sequence.	Replace Fail Safe Brake.
02A23	2-3	No Drive	I=0 EVER	Power connection is loose on the contactor, drive motors or traction controller. Internal diagnostic malfunction..	Check that all power connections are tightened to correct torque. Cycle key, if alarm persists traction controller will need to be replaced.



## TROUBLESHOOTING

Troubleshooting Guide					
Code 02	LED Flash Code	Symptom	Smartec Interface Tool	Why	How to Repair
02A24	2-4	No Drive	STBY I HIGH	Internal diagnostic malfunction.	Cycle key, if alarm persists traction controller will need to be replaced.
02A25	2-5	No Drive	EMERGENCY	The emergency stop button is engaged.	Turn off emergency stop.
				Wiring harness has been damaged	Cycle key, if alarm persists wiring harness will need to be replaced.
02A26	2-6	No Drive	CAPACITOR CHARGE	External device or shorted connection drawing power from positive battery connection or key switch.	Remove any unapproved device drawing power from system. Verify, repair or replace connections of positive battery and keyswitch as needed. If alarm persists replace traction controller.
02A27	2-7	Reduced Drive Speed	High Temperature	Debris not allowing traction controller(s) to cool properly.	Remove debris build up from traction controller and/or base. Replace traction controller if alarm persists.
				Traction controller baseplate temperature has exceeded maximum allowable.	Remove debris build up from traction controller and/or base. Replace traction controller if alarm persists.
				Extreme mowing conditions	Refer to owners manual for proper mower use.
		No Drive	High Temperature	Debris not allowing traction controller(s) to cool properly.	Remove debris build up from traction controller and/or base. Replace traction controller if alarm persists.
				Traction controller baseplate temperature has exceeded maximum allowable.	Remove debris build up from traction controller and/or base. Replace traction controller if alarm persists.
				Extreme mowing conditions	Refer to owners manual for proper mower use.
02A28	2-8	Reduced Drive Speed	Motor Temperature	Debris not allowing drive motor to cool properly. U,V or W power connections are incorrectly connected between the traction controller and drive motor.	Remove debris build up from drive motor. Connect traction controller and drive motor wiring per the manufacturers specifications. If alarm persists replace drive motor.
				Internal failure in drive motor.	Replace drive motor if alarm persists.
				Extreme mowing conditions	Refer to owners manual for proper mower use.
		No Drive	Motor Temperature	Debris not allowing drive motor to cool properly.	Remove debris build up from drive motor. If alarm persists replace drive motor.
				Internal failure in drive motor.	Replace drive motor if alarm persists.
				Extreme mowing conditions	Refer to owners manual for proper mower use.
02A29	2-9	Reduced Drive Speed	Battery Low	Battery(s) not charged or won't hold charge.	Attempt to recharge and replace battery(s) if alarm persists.
		No Drive	Battery Low	Battery(s) not charged or won't hold charge.	Attempt to recharge and replace battery(s) if alarm persists.
02A31	3-1	Reduced Drive Speed	Encoder Locked	Speed feedback below minimum allowable.	Reconnect or replace speed sensor.
				Wheel blocked from spinning.	Remove source of blockage.
		No Drive	Encoder Locked	Speed feedback below minimum allowable.	Reconnect or replace speed sensor if alarm persists.
02A32	3-2	No Drive	Encoder Error	High speed condition, speed sensor has quit working.	Cycle key, refer to owners manual for proper mower use, if alarm persists speed sensor will need to be replaced.

## SMARTEC APPENDIX 10

### TROUBLESHOOTING

Troubleshooting Guide					
Code 02	LED Flash Code	Symptom	Smartec Interface Tool	Why	How to Repair
02A33	3-3	No Drive	BRAKE	Brake switch input is high, disconnected brake switch, brake pedal not disengaging.	Verify, repair or replace brake wiring connections as needed, verify pedal is disengaged. Replace brake switch if alarm persists.
02A34	3-4	No Drive	THERMIC SENS KO	Internal diagnostic malfunction.	Cycle key, if alarm persists traction controller will need to be replaced.
02A35	3-5	No Drive	DRIVER SHORT-ED	Voltage low at contactor.	Verify contactor connection to negative battery for short or loose connection, repair or replace as needed. Replace contactor if alarm persists.
02A36	3-6	No Drive	CONTACTOR DRIVER	Voltage high at contactor.	Verify contactor connection to positive battery for short or loose connection repair or replace as needed. Replace contactor if alarm persists.
02A37	3-7	No Drive	COIL SHORTED	Voltage high at contactor.	Replace contactor if error happens during start sequence. . If error occurs when the accelerator/ drive handle is pressed to move, replace fail safe brake.
02A38	3-8	No Drive	VACC NOT OK	Malfunctioning accelerator, disconnected or shorted accelerator connection.	Verify, repair or replace accelerator connections as needed. Replace accelerator if alarm persists.
02A39	3-9	No Drive	FORW + BACK	Malfunctioning accelerator, disconnected or shorted accelerator connection.	Verify, repair or replace accelerator connections as needed. Replace accelerator if alarm persists.
02A42	4-2	No Drive	LOW VOLTAGE	Loose or shorted connection between positive battery(s) and/or traction controller, malfunctioning traction controller.	Verify, repair or replace connection(s) between battery(s) and/or traction controller as needed. Replace traction controller if alarm persists.
02A43	4-3	No Drive	MANUAL BRAKE REL	Fail safe brake has been manually overridden, malfunctioning manual brake release switch, loose or shorted connection.	Verify brake is not manually released, verify, repair or replace connections as needed. Replace manual brake release switch if alarm persists.
02A44	4-4	No Drive	No seat in run	Operator came out of seat while machine is moving, seat switch is making intermittent contact.	Stay in seat. Verify, repair or replace connections as needed. Replace seat switch if alarm persists.
02A45	4-5	No Drive	PEDAL WIRE KO	Disconnected or shorted accelerator connection.	Reconnect, repair or replace accelerator connection as needed. Check for debris in connector and clean as needed. Synchronize accelerator with Smartec interface tool.
02A46	4-6	No Drive	Deck CAN bus KO	External interference with the CAN communications. Damaged or loose connection. Damaged wire shielding or malfunctioning deck controller.	Cycle key. Verify, repair or replace connections from traction controller to deck controller as needed. Refer to mower manufacturer for wire shielding requirements, repair or replace shielding as needed. Replace deck controller if alarm persists.
02A47	4-7	No Drive	PROG VACC Not OK	Accelerator inputs not set.	Synchronize accelerator with Smartec interface tool.
02A48	4-8	No Drive	WRONG SET BATTERY	Incorrect or Improperly charged battery(s).	Charge or replace battery(s) per manufacturer's recommendation.
02A51	5-1	No Drive	INPUT ERROR1 (PAL KO)	Internal diagnostic malfunction.	Cycle key, if alarm persists traction controller will need to be replaced.
02A52	5-2	No Drive	00 RELOAD HM MDI	Traction controller or digital dash display has been replaced.	Machine will default hours. Leave key in on position for two minutes then cycle key off and back on.



# TROUBLESHOOTING

Troubleshooting Guide					
Code 02	LED Flash Code	Symptom	Smartec Interface Tool	Why	How to Repair
02A54	5-4	No Deck Operation	PTO time out	Power saving software has turned on due to machine in stationary position with the blades engaged.	Cycle key and restart deck.
02A55	5-5	No Drive	VACC OUT OF RANGE	Malfunctioning accelerator, disconnected or shorted accelerator connection.	Verify, repair or replace accelerator connection as needed. Replace accelerator if alarm persists. Synchronize accelerator with Smartec interface tool.
02A56	5-6	No Drive	Display CAN BUS KO	Disconnected or shorted can bus connection between traction controller and digital display.	Verify, repair or replace wire connection between traction controller and digital display as needed.
02A57	5-7	No Drive	CAN bus KO	CAN communication interrupted	Cycle key, check CAN wiring for opens or shorts, check the CAN shield wire is connected to the vehicle chassis, replace Digital Display or Traction Controller.
			Waiting For Node	Smartec Interface Tool is connected to the incorrect traction controller. CAN communication interrupted.	Switch interface tool to the other traction controller. Cycle key, check CAN wiring for opens or shorts, check the CAN shield wire is connected to the vehicle chassis, replace Digital Display or Traction Controller.
02A61	6-1	No Drive	NO SEAT START	Malfunctioning seat switch, disconnected or shorted connection.	Verify, repair or replace seat switch connection as needed. Replace seat switch if alarm persists.
				Operator not in seat.	Verify operator is in seat when starting mower.
02A62	6-2	No Drive	NO NEUT START	Drive handle or pedal not in neutral position, cruise control on, malfunctioning neutral switch, disconnected or shorted connection. If occurs while running, check the connection at the key switch	Verify pedal/handle position. Verify cruise control is off. Verify, repair or replace neutral switch connections as needed. Replace neutral switch if alarm persists.
02A63	6-3	No Drive	PTO ON AT START	PTO switch is on during start up. Malfunctioning PTO switch, disconnected or shorted connection.	Verify PTO switch is off. Verify, repair or replace PTO switch connection as needed. Replace PTO switch if alarm persists.
02A64	6-4	No Drive	ROS ON AT START	ROS switch is on during start up. Malfunctioning ROS switch, disconnected or shorted connection.	Verify ROS switch is off. Verify, repair or replace ROS switch connection as needed. Replace ROS switch if alarm persists.
02A65	6-5	No Drive	NO BRAKE START	Brake switch is not on during start up. Malfunctioning brake switch, disconnected or shorted connection.	Verify parking brake switch is on. Verify, repair or replace brake switch connection as needed. Replace brake switch if alarm persists.
16A06	None	No Digital Display	None	Digital display communication issue.	Cycle key. Verify, repair or replace CAN wire connections as needed. Refer to mower manufacturer for wire shielding requirements, repair or replace shielding as needed. Replace digital display if alarm persists.



## TROUBLESHOOTING

Mechanical Symptoms (No Alarm Codes)		
Symptom	Why	How to Repair
Reduced Drive Speed	Stripped Internal Axle Spline.	Replace Gearbox components as needed.
Reduced Drive Speed	Stripped gear.	Replace Gearbox components as needed.
No Drive	Stripped internal or external axle spline.	Replace Gearbox components as needed.
No Drive	Stripped or broken gear.	Replace Gearbox components as needed.
No Drive	Damaged or missing key, damaged key slot.	Replace key and or axle as needed.
Leaks	Damaged or malfunctioning seal, sealant or o-ring.	Replace seals, sealant or o-rings as needed.

## Deck System Troubleshooting

Deck System Symptoms		
Symptom	Why	How to Repair
No Deck Operation	Extreme mowing conditions.	Refer to machine owners manual for proper mower use. Move to short grass area, cycle key and restart deck. If problem persists, refer to the Deck System Resistance Test Procedure below.
	Blockage under mower deck.	Disconnect power from deck and clear of any foreign obstructions. Refer to proper procedure for disconnecting power from the system before attempting this repair (Reference page 7, Servicing Safety). If problem persists, refer to the Deck System Resistance Test Procedure below.

Deck System Resistance Test Procedure	
!	Make sure your Digital Multi Meter is capable of measuring up to 1.2 million ohms ( $\Omega$ ) resistance before beginning these steps. Refer to your Digital Multi Meter owners manual for correct dial settings.
!	Always disconnect the batteries before performing any maintenance or repair.
!	Wait 5 Minutes after disconnecting the batteries prior to working on the machine.
1	Remove any debris build up from all deck components.
2	Verify all power connections on deck motors and deck controller are torqued properly. If loose connections are discovered tighten to the correct torque values found in the service and repair manual. Reconnect the batteries per the instructions in the service and repair manual and check for proper deck operation. If loose connections are not found proceed to step 3.
!	3 Label all (8) deck controller connection points ( per Figure 3, page 13) on the edge of the deck controller housing so they are easily viewed for correct re-connection.
!	4 To ensure correct re-connection, mark all (8) wire connections with the corresponding connection point labels from step 3.
5	Remove all (8) wire connections from the deck controller.
6	Measure deck controller resistance ( $\Omega$ ): Reference Figure 3, page 13. (A) Place the negative (-) probe of a digital multimeter on the positive (+) battery terminal of the deck controller. (B) Place the positive (+) probe of the digital multimeter on deck controller terminals AR, then BR, then CR. Resistance for each should read between 270k ( $\Omega$ ) and 330k( $\Omega$ ). If resistance is above or below the specified range the deck controller will need to be replaced. Repeat process for deck controller terminals AL, BL and CL.
7	If no issues are found reinstall deck controller wire connections to the proper torque values located in the service and repair manual. (See page 28)
8	Measure deck motor resistance ( $\Omega$ ): Reference Figure 4, page 13. (A) Place the negative (-) probe of a digital multimeter on motor terminal A. (B) Place the positive (+) probe of the digital multimeter on motor terminals B, then C. If the resistance is more than 0 to 1 ( $\Omega$ ) ohms the deck motor will need to be replaced. Repeat process for other deck motor as needed.
9	Measure the resistance in the six pin motor connector (per Figure 5, page 13) by placing the negative (-) probe of a digital multimeter on pin 2 and the positive (+) probe on pin 3. Resistance should read between 800k ( $\Omega$ ) and 1.2m ( $\Omega$ ) ohms. Resistance between pin 2 and pins 1, 4, 5 and 6 should be 0 ohms. If resistances are above or below these ranges the deck motor will need to be replaced. Repeat the process for the other motor as needed.
10	If steps 1-9 are completed and the issues persist please refer to the mower manufacturer's procedure for wiring harness troubleshooting for possible repair or replacement.

